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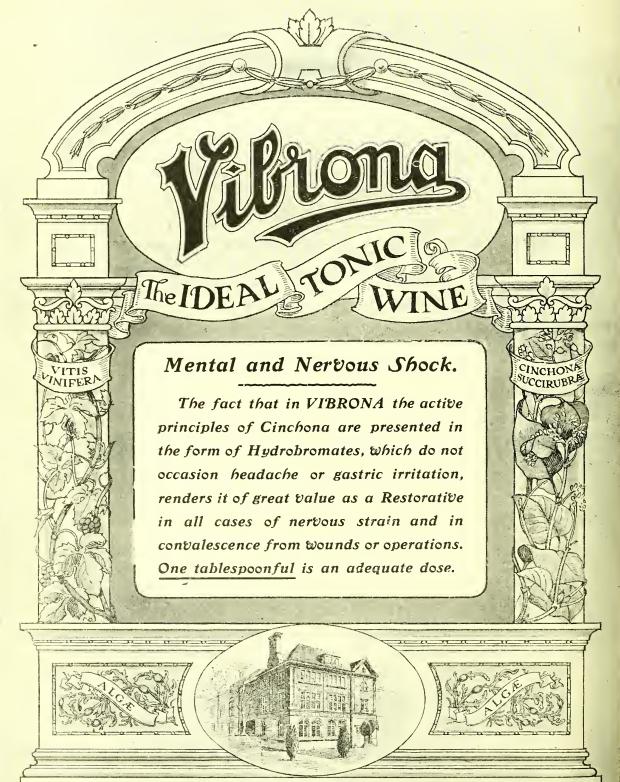
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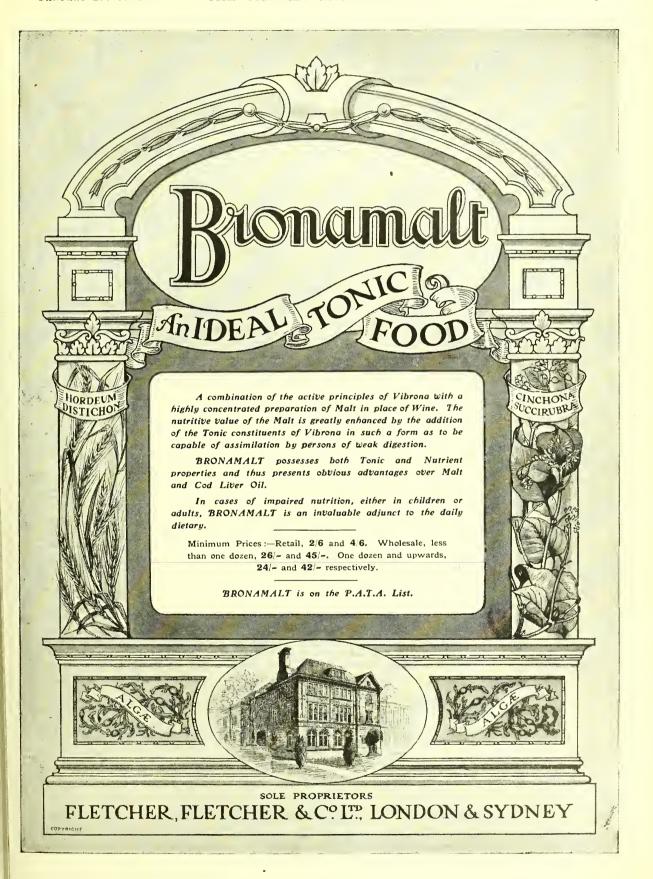
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Advertisers should, however, give this matter their attention now, and communicate with THE PUBLISHER, "THE CHEMIST AND DRUGGIST,"

42 CANNON STREET, LONDON, E.C., who will be pleased to give further particulars.

THE BUYERS' GUIDE. In this section, under appropriate headings, are given the names of firms advertising in this or other issues of the month. No charge is made to advertisets current for advertising in this journal are mentioned. The headings refer generally to the classes of goods actually advertised, but this is not a detailed Guide such as appears in "The Chemist and Druggist Diary." Inquiries addressed to the "Information Department," THE CHEMIST AND DAUGGIST, 42 Cannon Street. London, E.C., regarding articles not appearing in these pages receive prompt attention, as shown weekly in the editorial pages.

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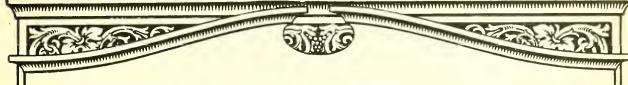
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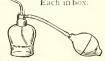
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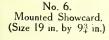
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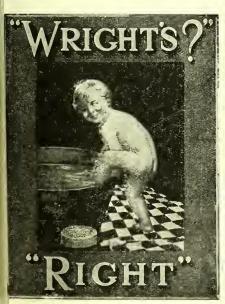


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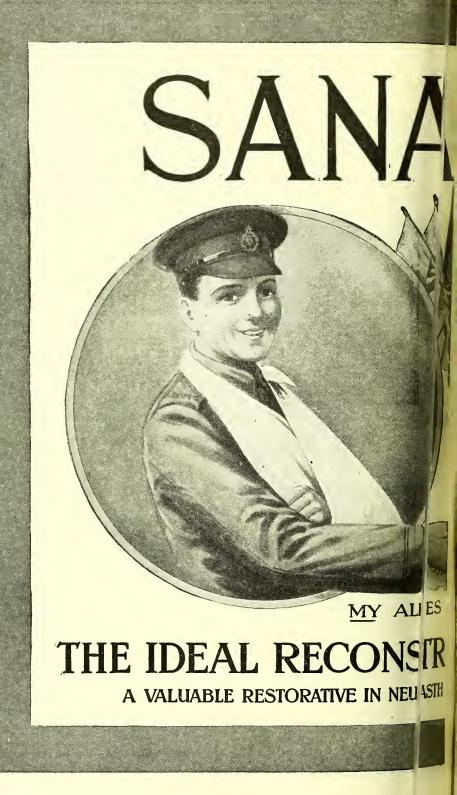
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The question is often asked nowadays. The Chemist who does not stock Sister Lauras Food is missing a good line.

Sister Lauras Food is achieving great success as a preparation for weakly babes and for invalids and the aged.

It makes milk digestible and is invaluable in cases of malnutrition.

It is a thoroughly reliable line and one that brings a bandsome return

that brings a handsome return. Samples and advertising matter free on application

SISTER LAURAS INFANT FOOD CO., Ltd., 156 Vincent Street,

MANUFACTURED BY

C. W. FIELD, LTD.,

Cambrian Mills, LIYERPOOL

Fracial Terms to Wholesalers and large Consumers

## PASCALL'S

GOLDEN =



MALTEX

Contains 25% Pure Malt Extract

of especial food value Children.

- ¶ Pascall's Golden Maltex is admirably suited for sale by Chemists, owing to its nutritive and restorative qualities.
- T Order through your Wholesale Druggist, or direct from the manufacturers,

JAS. PASCALL, Ltd., LONDON, S.E.

## Lofthouse & Saltmer, Ltd.

Wholesale and Export Drug Merchants, - Manufacturing Chemists -

#### HULL

Regret that, owing to great increases in cost of ingredients and containers, they are reluctantly compelled to raise the net prices of the following P.A.T.A. lines:

Protected Retail. Net. 6d. tins 4 -LOSALL'S SALT 1/- ,, 8/-1/6 bottles 10/6 BALLROOM FLOOR POLISH 1/- tins 7/6 MILK FOOD (1/- tins) 10d. each 7/-Dozen Boxes net. 8/6 4d. tabs. LOSALL'S SOAP (3 tabs. in box)

Chemists requiring effective advertising matter for Losall's Salt, &c., will, on application direct to Losthouse & Saltmer, receive a liberal supply of Dummies, Showcards, Window Slips, Price Tickets, &c., Carriage Paid, whether or no they have an account open with the Firm.

Although only introduced five years ago

## VITAFER

can now be obtained throughout the whole of the

## BRITISH EMPIRE

and is the most popular and valuable of all Tonic Foods.

The following list gives a few of the leading Agencies and Depots:

Special Agencies:

CANADA—J. B. KEEBLE, 53 Yonge Street, Toronto. SOUTH AFRICA—C. GERRISH, P.O. Box 390, Cape Town. AUSTRALIA:

SYDNEY—ELLIOTT BROS., Ltd. DENYER BROS.

MELBOURNE-FELTON, GRIMWADE & CO. W. J. W. CHILDS, P.O. Box 474.

ADELAIDE--A. M. BICKFORD & SONS, Ltd.
PERTH-FELTON, GRIMWADE & BICKFORD, Ltd.

NEW ZEALAND-J. A. COLTART, 147 Fitzgerald Avenue, Christehurch.

CHINA-A. S. WATSON & CO., Ltd., Hong Kong, Shanghai, Canton, Amoy, etc.

EGYPT-JEFFREY W. EADY, P.O. Box 1078, Cairo.

MALAY STATE3—PRITCHARD & CO., Penang and Ipoh.
J. LITTLE & CO., Singapore and Kuala Lumpur,
SEREMBAN DISPENSARY, Seremban.

WEST COAST OF AFRICA-PICKERING &BERTHOUD, Sierra Leone, etc.

Special Depots in India, Burma, and Ceylon:

#### CALCUTTA-

SMITH, STANISTREET & CO., 9 Dalhousie Square, BUTTO KRISTO PAUL & CO., 7 Bonfield's Lane.

A. B. DUIGENAN, 7 Colootollah Street.

BOMBAY-THOMSON & TAYLOR, Esplanade Road, MADON, SONS & CO., 16 Abdul Rehman St,

MADRAS-SPENCER & CO., Ltd. (all branches).

W. E. SMITH & CO., Ltd

LUCKNOW-SOLOMAN & CO., 42 Aminabad Park.

KARACHI-J. BLISS. E. BROOKS & CO.

RAWAL PINDI-W, WILSON.

LAHORE, SIMLA, DELHI-E. PLOMER & CO.

RANGOON MEDICAL HALL CO., 68 Merchant Street,

COLOMBO-CARGILLS, Ltd.

VITAFER is specially packed for Colonial Markets—e.g. for India and the Tropics, in bottles containing 4 oz., 8 oz., and 16 oz.

Wholesale Agents or Merchants should in all cases specify the market, so as to get the right packing.

AS A GUIDE TO BUYERS, THE PRICES FOR THE HOME TRADE ARE AS FOLLOWS .—

In Square, Upright Tins, containing 2 oz., 4 oz., 8 oz., and 16 oz.

Wholesale: 9/-, 14/6, 24/-, 42/-

WE INVITE CORRESPONDENCE REGARDING EXPORT TERMS.
With all orders is sent an ample supply of Counter & Window Advertising Material.

## SOUTHALL BROS. & BARCLAY, BIRMINGHAM.

#### PURE MILK CASEIN with GLYCERO-PHOSPHATES

supplied under Buyer's own name& labels at same prices.

## ASPIRIN ACID ACETYLSALICYLIC

British Make. Bulk & Tablets.

Tins same weights as Sanatogen.

### **VITAGEN**

10/6 16/6 27/- 45/per dozen. Bulk 3/- lb.

Telephone:
2215
London Wall.

BROMIDES

AMMONIUM,
POTASSIUM,
SODIUM

IONONE
Pure 106%

DIAMIDOPHENOL
(AMIDOL)

British Make.

ALL-

BRITISH

Bulk & Bottles.

Special Prices to Wholesale

Buyers.

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Cable Address:
"SELGOG
LONDON,"

ESTABLISHED 1872.

JOHN LORIMER

MANUFACTURERS' AGENT, 119 Finsbury Pavement, London, E.C.

BENZAL=
DEHYDE
BENZOIC ACID
BENZOATE
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SILVER PROTEINATE

(Protargol)
P.G.V.
British Make

ADEPS LANÆ, B.P.

B.P.
Anhydrous and
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Importer of
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SURGICAL FORCEPS
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PENCILS.
Manicure Flexible
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etc. etc.

THE MOST ECONOMICAL INFANTS' FOOD.

FRAME FOOD

ON P.A.T.A. LIST.

SHOWCARDS FREE.

FRAME FOOD CO., Standen Road, Southfields, London.

## "FERROCARNIS"

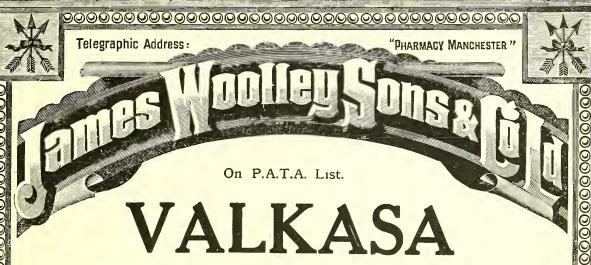
A pleasantly flavoured solution of iron in organic combination with BRAND'S Concentrated Raw Meat Juice.

Ferrocarnis combines the stimulating properties of meat juice with the tonic effect of iron. This product does not cause constipation, and thus affords a means of administering iron to patients who are unable to take ordinary iron preparations.

PREPARED BY

BRAND & CO., LTD., SOUTH LAMBETH ROAD, S.W.

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(REGISTERED TRADE MARK)



### TONIC NERVE FOOD.

ALKASA consists of the essential constituent of MILK, for forming flesh and muscle, with Glycerophosphates, the latter containing PHOSPHORUS, in organic combination, which nourishes the brain and nerve tissues—the whole forming an unrivalled FOOD for renewing strength, re-invigorating the nervous system and restoring the digestive functions.

VALKASA can be used to increase the nutritive value of all kinds of foods, such as custards, porridge, blanc-mange, puddings, omelets, &c.

In 2 oz., 8 oz. & 16 oz. Tins ... 1/-, 3/- and 5/6 (P.A.T.A. minimum).

SPECIAL PACKING FOR INDIA IN 3/- BOTTLES.

Stocked by London and Provincial Wholesale Houses.

Showcards Supplied.



INDENTS THROUGH BRITISH SHIPPERS.



No. 62 Quart size Corrugated Nickel Plated. Retail 12/6 each Per dozen 108/0



No. 44 Pint size Best plain Nickel Plated. Retail 10/6 each. Per dozen 90/0

No. 88 Quart size Best plain Nickel Plated. Retail 15/6 each. Per dozen 132/0

FOR IMMEDIATE DELIVERY.

Quarts ...

### **BOTTLES** VACUUM FLASKS

WE GUARANTEE THAT THESE BOTTLES ARE MADE IN AMERICA BY AMERICAN WORKMEN

#### Not Affiliated with any German Company

ALL BOTTLES EQUALLY! GUARANTEED TO

KEEP HOT THINGS HOT 30 HOURS. KEEP COLD THINGS COLD 3 DAYS.

Pints ...

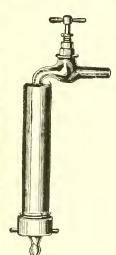
... 1/6 per dozen

36/- per dozen Pints Quarts ... 2/0 per dozen 72 - per dozen

Agents - HENRY C. QUELCH & CO. 4 & 5 Ludgate Square, LONDON, E.C.

May be obtained through all the London or Provincial Wholesale Houses.

## **PURE** DRINKING WATER



No. 23/6/7

No. 62/5

### The **Pasteur** Chamberland Filter.

OFFICIAL GOVERNMENT STATEMENT:

Wherever the PASTEUR FILTER has been applied, TYPHOID FEVER has disappeared.

WRITE FOR LIST B.

SOLE MAKERS:

The British Pasteur Chamberland Filter Co. 5 WHITE STREET, FINSBURY, LONDON, E.C.



CHARLES BOYTON & SON

Upper Charles Street, (oswell Road, LONDON, E.C. A Reproduction of our Attractive Showcards.

5/- "

## The Name Minson

has gained the confidence of an ever-increasing number of the Public who follow the advice of that dietetic specialist, Dr. T. R. Allinson, whose preparations, manufactured solely by the Natural Food Co. Ltd., are in constant demand, and are the source of much profitable business to those chemists who stock them.

## Dr. ALLINSON'S NATURAL FOOD FOR BABIES

A preparation which has strongly established itself as an ideal infant's food -successful even in the case of the most delicate or weakly children.

6d. Tins ... (minimum retail price) 6d. each 5/- per doz.

1/- , ... , 11½d. , 10/- , 2/4 ... 24 - ...

4/9

48/

### Dr. ALLINSON'S 'BRUNAK'

The breakfast drink, instead of TEA or COFFEE, is finding a place in every home. It does not cause nervousness, trembling, wakefulness, palpitation, or flushing, as do tea and coffee. It is as refreshing as tea, as tasty as coffee, as comforting as cocoa, and as harmless as water. 1 lb. Packet (7d.) 5/6 doz.

1 lb. Packet (1/2) 11/- doz.

### Dr. ALLINSON'S 'POWER'

Is a splendid food for breakfast or other meals. It is ready cooked.

The flavour is delicious, and everyone likes it.

In 1 lb. Packets ... ... ... 7d. each. 5/6 per dozen.

## Dr. ALLINSON'S Prepared Barley

KINDLY NOTE.—If any of our goods fail to give satisfaction to, or are returned by your customer as being soiled or out of condition from any cause, kindly exchange or allow for same, and we will either replace the goods or refund amount to you as you prefer. All prices are subject to alteration without further notice owing to the fluctuations in the price of raw materials consequent on the War.

We issue a list of Agents' addresses and shall be glad to add yours on receipt of a postcard.

THE NATURAL FOOD CO., LTD., Bethnal Green, LONDON, E.



## THE FOOD THAT BUILDS!

CHYMOL has already made the beginning of a big business for many Pharmacists. It is a satisfactory preparation from the point of view of the customer, because it is prepared with very considerable scientific care; and CHYMOL is a paying proposition from the point of view of actual profit. To those Pharmacists who are willing to co-operate with us on the selling scheme we are offering a scale of profit that is sufficient

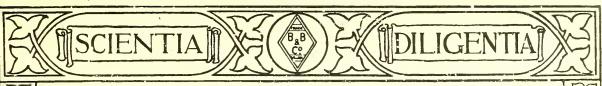
to compensate for all special attention in the nature of counter shows and window displays.

The P.A.T.A. Prices are:

THE CHYMOL COMPANY Armour & Company, Ltd.

ATLANTIC HOUSE HOLBERN VIADUCT, LONDON, E.C.





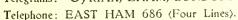
## CHLORAL **FORMAMIDE**

(CHLORALAMIDE).

VE are now manufacturing this in our Laboratories, and are prepared to book contracts for prompt or forward delivery.

Burgoyne, Burbidges & Co. LONDON, E. EAST HAM

Telegrams: "CYRIAX, EHAM, LONDON."







# BUSH'S MEDICINE TUMBLERS

Four Special Stock Lines

in Hand-Engraved Tumblers.

PRICES AND QUOTATIONS ON APPLICATION.



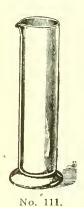






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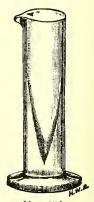
## HYDROMETER & SEDIMENT JARS



READY IN STOCK AT COMPETITIVE PRICES

Wholesale and Export only.

Manufacturers of Druggists' Sundries of All Kinds.



No. 694.

HENRY W. BUSH & CO., Ltd.

Rembrandt Works,
COMMERCIAL STREET, LONDON, E.

## ICHTHYOL LANOLINE SOAP

П

CAN NOW BE OBTAINED

П

FROM THE

BRITISH

**MANUFACTURERS** 

#### SEND ALONG YOUR ORDERS DIRECT OR THROUGH YOUR WHOLESALER.

N.B.—We will gladly post free samples with literature and lists direct to your own special doctors in your name if you will send us along their addresses. Our offer applies equally abroad. Please remember Midgley's is the leading British make and comprises one hundred different varieties, including:

SULPH. CAMPH. & BALS. PERU; ICHTHYOL; ICHTHYOL & SULPH. BASIC; SULPHUR; THYMOL; RESORCIN; LYSOL; TAR and Combinations; HYD. BINIODID.; BORIC ACID; SULPH. & AC. SALICYL.; CORROS. SUB.; EUCALYPTOL; &c.

The free export of Midgley's Soaps containing prohibited medicaments has been specially granted by H.M. Government (War Trade Dept.).

## MIDGLEYS, MEDICATED MANCHESTER.

## An Open Letter to Manufacturers.



### CHARLES MIDGLEY, LIMITED,

ENGLISH AND FOREIGN CHEMISTS.

Dear Sir,

Having already successfully handled special agencies for Lancashire and the North of England, we are now open to accept additional ones. Having both Wholesale and Retail departments to our business, we have all the requisite machinery for distributing goods through either channel.

The importance of manufacturers having active agents or representatives in large centres is no less to-day despite the necessity for economising both in men and money which makes it so difficult. We think the value and timeliness of our proposal from this point of view will commend itself to you. Our travelling representative calls on doctors, institutions, merchants, &c., with samples, and could do the same for you if desired.

4, EXCHANGE STREET, MANCHESTER.

Yours faithfully, CHARLES MIDGLEY, LIMITED.



Some of our attractive window material and the use one Chemist has made of it.

A
Thermogene
Window
Show
PAYS



Special
BONUS
Terms
still
available

This is Thermogene weather. Large advertisements in all the leading daily papers are reminding people of this fact. The demand for Thermogene is ever growing. A Thermogene window show in your windows will link you up with our extensive advertising campaign. Our terms are generous—our showcards and window material attractive and distinctive—our window show bonus most profitable. Don't miss the best season for the best seller.

THE THERMOGENE CO., LTD.

HAYWARDS HEATH, SUSSEX.

FASSETT & JOHNSON 86 Clerkenwell Rd.
LONDON, E.C.

# THERMOGENE CURATIVE WADDING

VANDENBROECK'S PROCESS.

### EUREKA

#### WEED KILLER.

THE FAVOURITE BRAND. SAFELY PACKED. SATISFACTORY RESULTS.

**POWDER.** In attractive enamelled tins Highly concentrated. Perfectly soluble. Fifty gallons solution dresses 200 sq. yards of paths.

1/- tins for 12 gallons 1/9 ... ... 25 ... FREE TINS. 6/- ... ... 100 ... FREE TINS.



LIBERAL TERMS.

ATTRACTIVE Advertising matter.

## HORTICULTURAL PREPARATIONS.

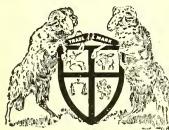
"EUREKATINE," the most successful Tobacco Fumigant. Destroys all Insect Pests without injury to Flowers, Leaves or Plants.

Larger sizes, Lower rates.

"EUREKA" QUASSIA INSECTICIDE.
LAWN SAND.
HELLEBORE POWDER.
BORDEAUX MIXTURE.
HAYWARD'S "SUMMER SHADE," &c. &c.

Write for full TOMLINSON & HAYWARD, LTD., LINCOLN.

## HAYWARD'S



Yellow Paste Dip.
Liquid Dips.
Combined Glycerine Dip.
Non-Poisonous Paste & Cake.
Luddington's Oils.
Worm Specific & Tablets.

Foot Rot Cures, &c.

Everything in the Dip
and Veterinary lines.

SHEEP DIPS.

Write for Particulars TOMLINSON & HAYWARD, Ltd., LINCOLN.

## DAIRY PREPARATIONS.

### TOMLINSON & CO.'S

BUTTER POWDER, BUTTER COLOUR, PRESERVATIVE, CHEESE RENNET, CHEESE COLOUR, &c.

On P.A.T.A.

WILLSON'S JUNKET TABLETS,
,, ANNATTO,
,, PERTH TINTS, &c.



### WATER-GLASS

Packed in Chemists' own names. Attractive styles. 75 per cent, of the Chemists selling an Egg Preservative obtain supplies from us. NOW IS THE TIME to send your orders. Favourable terms. Satisfaction given.

CORRESPONDENCE INVITED.

WRITE FOR LISTS, etc., Tomlinson & Hayward, Ltd., Lincoln.









## REDUCED

▼/E have now completed arrangements for the supply of—

## ENGLISH ASPIRIN

and after going carefully into the cost, we find we are in a position to make substantial reductions in the prices of Aspirin Tablets, grs. v:

Bottles of 25 Tablets

129 per dozen Bottles of 50 Tablets

24/9 per dozen Bottles of 100 Tablets

48/per dozen

In Bulk

38/2 per 1000 Tablets



THESE PRICES WILL ONLY REMAIN IN FORCE SO LONG AS RAW MATERIALS LAST.

The Aspirin itself is guaranteed to be absolutely pure and equal to, if not better, than that of alien enemy origin.

Chemist's Name and Address on 1 dozen.



## ARTHUR-H-GOX-C-GO-LTD

Manufacturing Chemists

BRIGHTON ENGLAND





Adistinct Ttyle of Label can be Reserved for every Pharmacist in each Locality

Allen & Hanburys Ltd.,















# SOAP:

Its History and Connection with the House of COOK'S, LONDON.



TO H.M.KING GEORGE V





# Edward Cook & Co. Ltd.

1914 \_ 1915

#### DIRECTORS.

Cook, Capt. E. Leonard

6th Batt. Essex Regiment

Hall, Capt. S. Godfrey

2nd East Anglian Brigade

#### STAFF.

Cook, E. A., 2nd Lieut. Bargrove, R. E. J. Bennett, F Bidewell E R Blyther, C. W Catt, Staff-Sorgt. Major C. C. Dow, W. W. Fletcher, Lieut. R. H. Fysh, A. R.

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Murphy, E

Neal, W J

Noakee, A

Nunn. Wm.

Phillips. A

Reese, C.

Platt, James

Robbins, W

Savage, A. V

Savage, H. S.

Scaggs, E. R.

Sealev. 1. 1.

Searle, F. W

Tanter, J. W

Thorne, Albert

Thorne, G. A.

Turner, P. W.

Turner, W. F.

Wagstaff, Geo.

Turpin, F

Tyler, F. G

Walker, B.

Taylor, P.

Starling, Erneet

Passmore, T. H.

Rentecombe, Sergt. F.

Pennick, Wm.

R.N.V.R 7th London Batt. R.F.A. Army Ord. Corpe Territorial R.N.V R Westminster Dragoons Westmineter Dragoons R.A.M.C.T Army Service Corps R.A.M.C

#### WORKMEN.

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Maris

Maynard, A

Medcalfo, Qtr.-Maeter-Sgt.

ASC Last Anglian (Essex) R.G.A. 17th County of London P.F.A. 1st Essex Battery, R.F A. 1st London Royal Engineers 17th County of London Batt. Royal Field Fueiliers East Anglian (Essex: R.G.A. Royal Fusiliers 204 Battery R.H.A Royal Field Artillery Discharged 17th County of London R.F.A Army Service Corps 17th County of London Essex Regimient R.F.A. Rifle Brigade 10th County of London 8th Batt. Rifle Brigade South Lancashire Regiment 14th Husears 8th Essex Cycle Corpe. Duke of Cornwall L.I. Cycle Coy. West Ham Batt. R.A.M.C. R.G. A R.F.A. (diecharged) 6th Essex, H Company Royal West Kent Regiment 17th County of London Batt. K.R.R., 6th Battalion Royal West Kents Army Service Corps 1st Eesox Batt., R.F.A. Army Service Corpe National Reserve Army Service Corpe Discharged Army Service Corpe 8th Cyclist Eesex Regiment

(accidentally shot)

Norfolk Regiment

Warren, L. Waters, J. W Weddell, H Whelan, A. White, E. White, Patient Whitehead, J. Windy, W. A., Cpl. Winters, H. C. Young, A. Young, E

Hazell, Wm. Waites, H. Walker, Geo.

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0. V.R. 6th Essex 6th Essex 13th Essex, W. H. Battalion Middlesex Regiment 11th Eeeex, N.R. Army Service Corpe R. A. M. C. Army Service Corps, M T R.F.A. R.F.A Royal Berkshire Regiment Cty. of Lond. Batt., 5th L.I.B. 17th County London 4th Hussare, Q.O. 4th City of London R.F. Royal Engineers 1st London Divisional Engre East Surrey Regiment R. A. M. C. (T) 17th County of London Batt. Duke of Cornwall'e L.I. 3rd Batt. Eseex Regiment (killed in action) 17th County of London Batt. 61 Comp., Exped. Force Royal Fleet Reserves 17th County of London Batt. Essex Regiment, 6th Batt. R.F.A. 3rd King's Own Huseare Bedfordehire Regiment 2nd City of London R.F. R.F.A. Army Transp. Corps National Reserve, 6th Eeeex 1st East Anglian Brig., A.S.C. 6th Essex

Munitions Munitions Munitions

Royal Berks.

61st Comp., Exped. Force

13th Essex



## Soap Bubbles

And—this Life is little more

A Bubble thrown on Fate's hard rocky shore;
It has its moments of bright phantasy,
And floats in fairy elegance above
The common Earth; our gross humanity
In golden glittering hues, as perfect love
It hovers on the breezes' lightest breath
Until its own expansion woos its death.

# SOAP:

ITS HISTORY AND CONNECTION WITH
THE HOUSE OF

## COOK'S, LONDON.

Had I the Muse of Byron or of Hood, I'd sing of Soap in rythmic cantos sweet; Enchant thine ear and widen thy purview; Bring home to thee the wondrous, world-wide scope That he must take who manufactures Soap. Take thee to lands across the Southern Seas, And roam the world in search of our supplies. Had I a tongue of eloquence so rare That I could tell the story of the earth And carol forth its glories, I would engage to bring before thy mind A feast so rich of goods that soaps enhance, As to astound thee. But being one of modest mind and mien, I will relate in simple words and true The History of Soap as I do know it, And crave your pardon that I'm not a poet.

H.A.

#### CHAPTER I.

OMEWHERE, far away in the past ages, someone conceived the idea of making Soap. It may have been a world-weary scholar or apothecary, desirous of wresting from nature yet another of her secrets, or it may have been

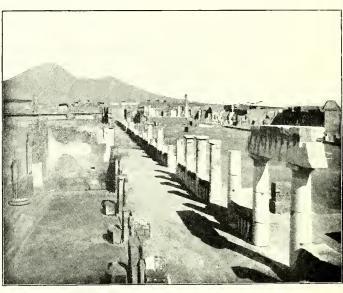
some beautedamsel ous desirous of making herself yet more fair. History tells us not. We are left to draw upon our imagination as to the ablutions  $\alpha f$ our earliest ancestors.

The Hebrew
"bôrith,"
translated
"soap," is
mercly a gen-

eral term for cleansing substances. A reference is made in Job IX., 30, of "snow water" being used for making hands clean, and again in Jeremiah II., 22 (revised version), the following appears: "For though thou wash thee with lye, and take thee much soap, yet thine iniquity is marked before me." By the latter it is clearly shown that a kind of soap

was used early in the 7th Century (B.C.) as recorded by Jeremiah about the year 612, B.C.

Homer, in describing the laundry operations of Nausicaa and her maidens, makes no mention of the use of soap, but tells us that they washed clothes by treading upon them with their feet in pits of water. It is,



RUINS OF POMPEIL

however, comforting to find that when Pompeii was uncovered to the modern world a soap factory was laid bare and some soap was found in quite good condition.

The historian Pliny, or, to give him his full title, Caius Plinius Secundus, who perished A.D. 79 in the destruction that Vesuvius rained down on Pompeii and Herculaneum, records the introduction of soap as an invention of the Gauls, made from tallow and ashes. He speaks of two kinds—liquid soap and hard soap—but declares that the soap was used to "give a reddish tint to the hair," and as the Latin name for soap is "Sapo"—a pomade for colouring the hair—Pliny was no doubt correct. He also states that soap was used more by men than by women.

There is no doubt that before soap, as we know it, was invented, detergents of one sort or another were in general use, but in primitive forms. There are, and always have been, various soapy plants: that is, plants, the roots, leaves or berries of which can be used for making up a compound of a distinctly soapy nature, such as quillaia bark, the coealpina, and the well-known soapwort (saponaria officinalis). know that the Romans used these. and what more natural than that they should have introduced them into England?

"Savon," the French word for soap, is ascribed to its having been manufactured at Savona, near Genoa.

#### CHAPTER 11.

Soapmaking as a trade was first introduced into England in the 14th Century, and we read of soap being sold in Bristol at 1d. per lb.

The manufacture of Soap began in London in 1524, but not until a hundred years later do we come upon any authoritative history of its progress.

Charles I. gave a monopoly to the Governor, Assistants and Fellows of the Society of Soapmakers at Westminster, in 1622, on the condition of their payment to him of £4 per ton on 5,000 tons annually. twenty Soapmakers outside the Society objected, and were promptly fined in various sums from £500 to £1,500 and sent to prison, where two of them died. The Society obtained powers to restrict the soapmaking industry to them, and arbitrary rules were laid down as to the price at



CHARLES L-ABOUT 1625.

which soap should be sold, and the materials from which it should be made. In 1635 other Soapmakers came on the seene and were committed to prison, and greater power was given to the Society on condition that the £4 per ton was increased to £6. In 1637, according to a pamphlet printed by Nicholas Bourne in 1641, the Society "having vexed the whole Kingdom with their soap, obtained a Warrant from His Majesty for £40,000 for giving up the patent, and £3,000 for their houses, and they obliged the soapmakers of London to pay them £20,000 for their material, so that they might have use of their trade again, of which they had been deprived."

This did not, however, stop the persecution of the unfortunate Soap Manufacturers, as we find the Soapmakers of London presenting an address to Parliament on the 24th September 1650, complaining of the excise laid upon their imported materials, potash, oil and tallow, and moreover, having to pay 4s. 8d. per barrel excise on the manufactured soap.

From this time, very little is known of the trade until the beginning of the Eighteenth Century. They were stormy times, and the chronieles are taken up with the important doings of the Long Parliament, the quarrels and battles

between Parliament and King, and advent of Oliver Cromwell, and execution of Charles I. on the 30th January, 1649, the terrible plague of London in 1665, which carried off more than 70,000 people, the great fire in the very next year, which nearly wiped out London and destroyed nearly a hundred churches, including St. Paul's Cathedral, the religious persecution, and the revolution of 1688. In 1700, during the reign of William III., the famous Act of Settlement determining the Protestant succession to the Throne was passed, and in this reign, the Bank of England was established, the National Debt was commenced, and the Society for Promoting Christian Knowledge was founded.

Little wonder if amongst all these stirring and epoch-making events, the peaceful trade of soapmaking was hidden in obscurity so far as the historian is concerned, but that it was making progress is certain, for in the year 1711 Queen Anne thought it good enough to impose an Excise Duty.

## CHAPTER 11I.

The Excise Duty imposed upon Soap by Queen Anne in the year 1711 was one penny per pound upon all soap made in Great Britain. This charge of very nearly Ten Pounds per ton pressed very heavily upon the Soapmakers, and when it was increased in 1713 to  $1\frac{1}{2}d$ , per pound, and later in 1782, to  $2\frac{1}{4}d$ , per pound on hard soap and  $1\frac{3}{4}d$ , per pound on soft soap, the cost of soap became a serious item to the poor man.

The manufacturers had not only to complain of the Duty, but of the difficulties and disabilities under which soap manufacturers laboured



QUEEN ANNE.

while the exciseman was their master. Rooms and Offices had to be fitted up for the excisemen, one or more of whom were in the factory day and night. The Excise Officer was present at all operations and practically controlled—or rather, hampered—the makers' movements on every occasion. No improvement could be made, no experiment could

be tried but what Mr. Exciseman must know all about it.

The Tax was moreover so high that there was every temptation to evade it, and as one writer put it "the makers being obliged to manufacture as directed by law, and not according to their judgment, the ignorant and intelligent are placed upon the same footing, and the dishonest or fraudulent traders are in a more advantageous position than either."

Another great disadvantage under which the soapmaker laboured was the cost of his materials. The soap ashes used in the saponification of the fats by the soapmakers were expensive as the supply was limited, but as no substitute was then known, makers had to pay the price, and throughout the Eighteenth Century, thoughtful and hard-working men were industriously trying to improve the manufacture of soap, and the consumption was steadily going up.

Towards the close of the Century, a great discovery was made, which had an enormous bearing on the future of the whole soap making industry.

The ashes used by the soapmakers were also used by the manufacturers of gun powder, and when, during the French Revolution, our British Fleet took control of the High Seas and refused to allow the French powder makers to import these ashes, there



WEIRD PROBLEM OF THE WORLD'S INCREASING CLEANLINESS.
"WILL THE SOAP GO ROUND?"

was something in the nature of a panic. The French, however, are a very elever and resourceful race, and their ehemists set to work to find a substitute, with the result that the great chemist, Leblanc, discovered the secret of making soda from common salt by vitriolizing the salt, and then roasting, washing and causticizing the product, which he called soda ash.

Leblanc's discovery made a great difference to the soapmaking industry, and from that day (1789) to the present, the trade has grown and grown until it seems as if the demand will swallow up the supplies of raw materials; indeed, a writer in the "Daily News," humourously reviewing the situation asks plaintively "Will the Soap go round?"

### CHAPTER IV.

In the County of Norfolk, in the towns of Lynn and Norwieh, there were established at this time two Soapworks. How long they had been established we have no The businesses may well have been handed down from father to son from generation to generation. Perhaps one of the former owners suffered punishment at the hands of Charles I. when so many soapmakers were thrown into prison for daring to urge their independence in face of the



LYNN MARKET CROSS-ABOUT 1710.



Lynn Custom House-About 1683.

unfair monopoly granted by the King to the Society of Soapmakers.

Our first authentic records, however, date back to the close of the Eighteenth Century, when the businesses were in the hands of a family of the name of "Cook."

There have been many famous men of that name who have left their mark upon the world. Soldiers, sailors, statesmen, and even adven-

turers, but Edward Cook of Norwich and Lynn, was content to subscribe himself simply "Soapmaker," and patiently experimented in his laboratories to produce from edible fats and ashes obtained from suitable plants gathered on the Sicilian and Spanish Coasts, SOAP of the finest quality, fit for Lords and Ladies, and even the King in his Royal Palace.

Norwich at that time was divided into four great Wards, which were sub-divided into smaller divisions and had a population of about 40,000. It had made great strides since the days of Claudius Cæsar, the Roman Emperor who in the fourth year of his reign invaded this part of the Island of Great Britain in the year 46 A.D. The aborigines of the Country were then called the "ICENI."



NORWICH MARKET PLACE-ABOUT 1800.

In the year 1800 the City of Norwich sent two representatives to the Imperial Parliament, and its eivil Government was vested by Charter in a Mayor, twenty-five Aldermen, two Sheriffs, a Recorder, High Steward, a Chamberlain, a Town Clerk, and sixty Common Council. The Ecclesiastical Government was under the Lord Bishop of Norwieh,

and the Military Government was regulated by the Lieutenant of the City and County of Norwich.

There were extensive manufactories of Worsted.

NORWICH CASILL-ABOUT 1809.

Damasks, Satins and Fine Fabries; also many other industrial concerns, of which Edward Cook, Soapmaker, was one.

Norwich Castle dates from 575. It was built in the reign of Uffa, King of East Anglia, and made a place of defence. In 642, it was made a Royal Castle, but it was destroyed in 1004 and rebuilt in 1018. It continued to belong to the Crown until the year 1805, when King George III. gave it to the County of Norfolk for ever.

Our illustrations of Norwieh have been reproduced by the courtesy of the Librarian, Guildhall, London, from the History of Norwieh published by P. Brown, in 1814.

In the year 1801, Lynn, situated on the eastern side of Marshland and of the Great Level or Fen Country, had about 10,000 inhabitants. It was here, 42 miles from Norwich, that

Edward
Cook had
his branch
Soapworks
on the
banks of
the river
Ouse. At
this part of
the banks,
the Ouse
was reekoned about
as wide as
the Thames

above London Bridge, and Lynn owed most of its consequence to the River which formed its communication with the Sea, about 12 miles away.

Our illustration of the Customs House, Lynn, has been reproduced from William Rickard's History of Lynn, published in 1812.

Here then in Norwieh and Lynn, within one hundred miles of the great City of London, with which a century later the name of "Cook's"

was to be so closely connected, dwelt Edward Cook, Soapmaker.

Edward Cook was one of the first to perceive the possibilities and advantages of Leblanc's discovery, and we find him at the beginning of the Nineteenth Century planning further extensions, and about the time that

the world was ringing with the news of Wellington's glorious victory on the plains of Waterloo we find Edward Cook planning fresh campaigns on the battlefield of commerce. Unfortunately some of the books have been destroyed, and the oldest ledger in our possession bears the date 1817, but the

Milling Spakyfree.

details of the business given therein are very interesting and comprehensive. It is not a heavy tome, nor yet a modern loose-leaf ledger, but it is the private ledger giving particulars of stock, debtors and creditors, cash in bank and in hand annually from July 30th, 1817, until December 31st, 1820.

In 1820, a great event happened in English History, no less than the death of Good King George III. He had reigned sixty years and his death was generally lamented.

In this year we find that Edward Cook acquired the London Soap Works of Mr. Darby, Soapmaker, at

> No. 23 Bankside. Bankside is in the Borough o f Southwark on the bank of the river Thames. extends and from London Bridge by the beautiful and historic St Saviour's Cathedral towards Southwark Bridge (now in process of rebuilding), Bankside is stated to be the site of the Globe

Theatre of Shakespeare, built about 1599, burnt to the ground on St. Peter's Day, 29th June, 1613, and rebuilt sometime between that date and the 29th March, 1619, when a grant was made by James 1. to several of Shakespeare's associates and friends to play in the new theatre.

Shakespeare lodged in this neighbourhood, and his plays were produced at the Globe.

Taylor, the Water Poet, in his work published in 1630, says:—

"As gold is better that in fire's tried.

So is the Bankside 'Globe' that late was burned."

being on equal terms and the headquarters being in London, whilst Norwich became a branch house.

In 1823, Edward Cook's eldest son John was taken in partnership, three years later Mr. Brickwood retired from the business, and John's younger brother Edward joined the firm, which was renamed "Edward Cook & Son."



ESCAPE OF MARSHALL HAYNAU, WITH POLICE GALLEY, SEPTEMBER, 1850, FROM BARCLAY, PERKINS & CO'S, BREWERY,

On reference to old maps of London (1560–1570), we see that on Bankside there used to be Bullbaiting and Bear-baiting Rings, circular buildings in their own grounds, where bulls and bears were baited by dogs.

About this time Mr. Cook joined hands with Latham Brickwood, and the business was carried on as Brickwood & Cook, the partnership The illustration which, by the courtesy of the proprietors of the "Illustrated London News," we are able to reproduce, is of Bankside, 1850, and depicts the police assisting General Haynau, the Commander of the Austrian Forces during the Hungarian War to escape from the "George" Public House, Bankside. In the wars in which he had taken part in Italy and Hungary, his flogg-

ings of women and other cruelties procured him the name of the Hycena of Brescia. He came to London, and among other sights visited Messrs. Barclay, Perkins & Co's.



OLD GLOBE THEATRE, SOUTHWARK,

Brewery, Bankside, on the 4th September, 1850, and as soon as the labourers and draymen recognised him, they pursued and very nearly lynched him.

In 1831, Edward Cook, Senior, died, and the business was removed

to Goodman's Yard, Minories, under the title of "John & Edward Cook."

During these years the business was steadily improving, and it is gratifying to note, when we turn to the last entries in the Ledger that the accumulated capital in 1831 was £10,000 more than when the Ledger was opened in 1817.

On the 31st May, 1833, the Duty on Soap, which since 1816 had been 1\frac{3}{4}d. per pound on Soft Soap and 3d. per pound on Hard Soap, was reduced to 1d. per pound on Soft Soap and 1\frac{1}{2}d. per pound on Hard Soap.

Soapmakers had to pay £4 annually for their license, and we find it recorded that in 1839 there were 177 Soapmakers in England, 19 in Scotland and 183 in Ireland. Ireland, however, was not subjected to the Soap Duty.

From the Excise returns, it appears that in 1841, a total of 169,666,742 pounds of Soap (Soft and Hard) was made in England and Scotland, being an increase of about 30% since 1832. The net amount vielded to the Public Revenue by the Soap Duty was £815,864, after deduction had been made for allowance on soap used in the woollen, silk, flax and cotton Manufactures. This allowance amounted to seventyeight thousand, one hundred and twelve pounds sterling, granted on 10,190,160 pounds of hard, and 9,090,184 pounds of soft soap.

### CHAPTER V.

We now come to another important chapter in our history. Edward Cook, Scnr. has passed away, and in his stead John and Edward, Junr. govern the business.

Our Sailor King William IV. is on the Throne. and during his Reign we see the Reform BHcarried also the Act for Abolishing Slavery throughout the British Dominions. and an Act to limit the hours during which females and young children might be employed

in factories,—three Acts of far reaching results. He died in 1837, and in that year we find Edward Cook & Sons, with other Soapmakers, including such well-known names as Crossfields, Soames, Hazlehursts, Thomas, Gibbs, and Wheens attending a Meeting of the London & County Association of Soap Manufacturers at the "George

& Vulture" Tavern, Cornhill, on Wednesday, 8th February, to protest against the Excise Duty on Soap as impolitic, unfair and immoral, as the method of collection afforded encouragement to the dishonest, and proportionate discouragement to the



QUEEN VICTORIA-ABOUT 1850.

honest trader. and that more. over although soap was amongst the few articles of first necessity to the health and comfort of the population, particularly of the industrious classes, the condition of the Excise Duty was that the poorer the consumer, the higher the duty he pays,

inferior soap paying 75 per cent., superior from 20 to 50 per cent.

The Chairman at the Meeting was Mr. Hawes, of B. T. & W. Hawes, Soap and Candle Makers, Old Barge Stairs, Commercial Road, London, and it is interesting to note that about 250 years before this, Queen Elizabeth's Barge House stood on the site of Hawes' Factory. The

Barge House was a building wherein the State Barge appears to have undergone the necessary repairs. A creek or dock of some kind or other existed, into which the state barge was brought, but in course of time house and creek disappeared, Hawes' Factory being built upon the site.

In the same year, Victoria the Good came to the Throne, and in

her reign, the agitation against the duty on soap came to fruition, and the tax was abolished in 1853. It then produced, according to the Chancellor of the Exchequer, Mr. Gladstone, about £1,126,000 annually.

The years 1837 to 1845 are of an



W. E. GLADSTONE -ABOUT 1853.

Duty.

extremely interesting personal nature to the descendants of John and Edward Cook. During those years, they were trading together as John and Edward Cook, at Goodman's Yard, The Minories. Edward Cook, his wife and baby, lived on the factory, although Edward was often away as he acted as his own commercial representative, and travelled the Eastern and Southern Counties of England in a phaeton, can-

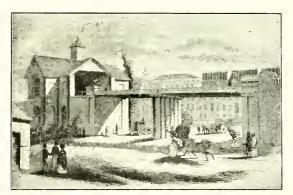
vassing for orders. John Cook kept to the office and works, and the records show a very human touch in the correspondence between the brothers. Postage on a letter was 8d., so that it was an item to be considered. John would write his brother about business, and would then send the letter into the house where Anne, Edward's wife, would

add her own private and personal portion, doubtless wafering it down before returning it to the office for posting.

It was by such careful and thoughtful management of both private and business matters that progress was made, even though suffering

under the injustices of the Excise

In the year 1845 on the 24th June, the firm of John & Edward Cook dissolved partnership. At that time there was first a flourishing Tallow Melting and Refining Industry, and an equally progressive Soap Business. John Cook took the Tallow Melting Business, and removed to Bethnal Green, where, with his son, he settled down to push and increase



FENCHURCH STREET STATION-ABOUT 1840.

his trade. Edward Cook took the Soap Business and continued at Goodman's Yard, under the name of Edward Cook & Co., making and marketing the genuine pure yellow and mottled soaps that his father had taken so much pride in perfecting.

From then until 1857, there is nothing of special moment to chronicle in the history of our house, although memory at once turns to the horrors of the Crimean War and the Indian Mutiny which, in 1854

and 1857, caused so much blood to flow, and so many houses of mourning in England.

In 1857, Edward Cook took into partnership his son, Edward Rider Cook, who was then 22 years of age, and one of the first things they had to do was to consider the question of removal from the

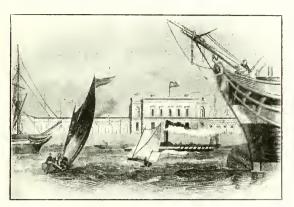
Minories, as the site of the Works was required by the London and Blackwall Railway Company, and it was sold to them in June 1857, for £10,000.

It is interesting to note that this Railway was worked not by locomotive engines, as most other lines were, but by station-

ary power. The trains were propelled to Blackwall by means of two stationary engines of 120 horse power each, which were worked in shafts sunk to the right and left of the lines. To these engines, fly-wheels or drums were attached, each of which weighed 43 tons, and was 22 feet in diameter. A tail rope was fastened to the drums which was wound and unwound at each end by the engines. The whole train was never stopped at the intermediate stations, but the



BLACKWALL RAILWAY, SHOWING DRUMS-ABOUT 1840.



BLACKWALL STATION-ABOUT 1840.

several carriages were attached or detached for their respective places of destination by means of a rope and iron pin, while the main train was whizzing its course onward.

After a careful search in and round London, it was decided to purchase a site for the new Works in Bow, and Edward Rider Cook travelled about England seeing as many Soap Works as possible, so that when it became necessary to

build the factory at Bow, he was able to undertake the arduous duty of Clerk of the Works, sleeping and living close to the buildings. The result of their foresight is that much that they built still stands, and is useful, nay valuable.

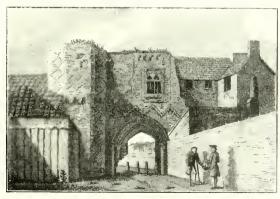
The new Works were opened on the 10th March, 1859. They were

built on the Banks of the River Lea, near the site of what was popularly supposed to be the old Palace of King John. King John's Palace was a very ancient house situated at Old Ford but no evidence can be traced to support the tradition of this Mansion ever having belonged to King John. It was supposed to

be the same which in old Deeds is called Gissing Place or Petersfield, which, with nineteen acres of land in Old Ford, was conveyed in 1418 by John Gist to Humphrey, Duke of Gloucester, and others.

As early as the Reign of Queen Elizabeth, this building was divided into tenements, at which time it was called the "Old Place" and the "Great Place."

Spanning the River Lea, and at the



GATEWAY CALLED KING JOHN'S CASTLE, OLD FORD, 1787.

end of Cook's Road, is Bow Bridge, a handsome iron structure recently built, and it will be of interest to recall the history of the earlier bridges.

The original Bow Bridge was one of the first, if not the first bridge



OLD BOW BRIDGE.

built in England with a stone arch, and it was only 13 feet 6 inches wide. It was erected sixty years before the first bridge over the Thames was commenced in 1176.

It was erected by command of Queen Maud in the early years of the twelfth century, and it is recorded by Stow, an eminent English antiquarian of the sixteenth century, that the Queen, when travelling by the Old Ford over the River Lea, was very nearly drowned, and, realizing the danger of this crossing, Her Majesty caused the bridge to be built one mile distant from the Old Ford and at the head of Stratford Town, now called Bow, "because the bridge was arched like a bow, a rare piece of work, the like of which

had never been seen in England before."

For the purpose of maintenance and repair, Queen Maud purchased certain manors, and a water mill called "Wiggen's Mill," which stood on the site of the present Abbey Mills, and the endowment was entrusted to the Abbess and Convent of Barking, who transferred the charge to the Abbot of Stratford in the year 1135, and he undertook to maintain the Bridge and to pay the Abbess a yearly rent.

In the reign of Henry III. (1216-72) the charge of keeping the Bridge in repair was delegated by the Abbot of Stratford to a bridge-master, who levied a toll of "one penny for every cart carrying corn, wood, coal, etc.,



NEW BOW BRIDGE.

twopence for one carrying teasel (the fuller's thistle, and for dressing cloth) and eightpence for carrying a dead Jew."

Apparently no charge was made for the carriage of a dead Gentile, and no mention is made as to a toll on soap (this latter fact is accounted for by the very sufficient and interesting reason that Soapmaking was not introduced into England until the 14th century).

Old Bow Bridge stood for six hundred years, but during that time it

had been subjected to so many alterations and repairs that the original design was lost sight of. It was also the cause of much litigation between those parties responsible for the repairs.

In 1835 it was found to be in such a bad state that it was decided to remove it altogether, and in its place a new bridge of onc oblatearch was built at a cost of £12,000. This bridge was

opened for traffic in 1839, twenty years before the East London Soap Works was opened at Bow.

In the year 1905 this bridge was found to be inadequate, and it was demolished to make room for the present iron structure.

Our pictures will be of great interest, as illustrating the passing of the Old Bridge and the coming of the New.

For the facts and dates given above, we are indebted to Dr. Pagenstccher's "History of East and West Ham."

Near Bow Bridge stands another monument of Time—Bow Church.

Many attempts have been made to determine the age of Bow Church, but the exact date of birth remains "wropt in myst'ry." We only know that the present edifice is the result of the rebuilding of an older one, and that this rebuilding took place in the reign of Henry VII. towards the close of the 15th century. There is evidence. however, that the Bishop's License to build a Chapel



Photo] OLDE BOW CHURCH. [S.J. Jeans

was obtained in 1311, when Edward II. was on the throne, and the site, which was part of the "King's Highway," was given by his successor, Edward III., who for this reason is credited with being the Founder of the Church. At this time Bow was, of course, but a tiny hamlet surrounded by green fields, and the

River Lca was indeed a "Silvery Lca."

The Church was originally a Chapel of ease to the Mother Church of Stepney, and was built in consequence of a petition from the inhabitants of Bow and Old Ford stating the distance from their homes of the Church at Stepney,

most picturesque of London's old Churches.

There is a curious old stained glass window in the Church, in which S. Paul is delineated with a pair of huge antique spectacles, typical of his weak sight. On the North outer wall of the Church is a monument dated 1758 to a flighty young damsel



VIEW OF BOW ENTIRING FROM LONDON, 1783.

and the difficulty of the roads which in winter were often impassable on account of the floods. It was not until the reign of King George I. that it became the Parish Church of S. Mary, Stratford, Bow.

Occupying the prominent position it does, with its fine square tower crowned with an embattled parapet, it presents quite an imposing appearance and is certainly one of the of 83, who wished the following lines inscribed thereon:—

"Farewell, vain world, I've seen enough of Thee:

And now I care not what thou sayest of me:

Thy smiles I court not, nor thine anger fear:

Freed from them all, my Head lies quiet here:

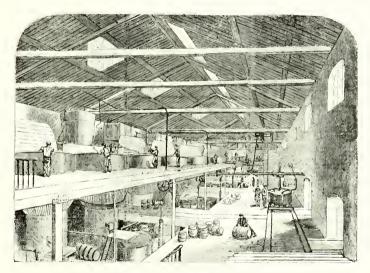
What faults you hear of me, pray mind to shun:

And look at home, enough there's to be done:"

The last two lines, even in these days, are not without meaning.

On the South side there is a monument in remarkably good preservation, to a family of the name of COOK—one of the members is mentioned on it as "John Cook, Collar Maker to His Majesty." The date of his death is given as 1763, so that

1760 and they were last re-hung in 1901. The old Church-wardens' accounts prove that even before 1760 an older set of Bowe Bells existed and probably rang out many a lusty chime years before Dick Whittington was born in the 14th century, even if they were not the actual bells heard by him.



INTERIOR OF COPPER HOUSE-7TH Nov. 1863.

we can conclude that he probably made collars for both George II, and George III. Now in the reign of George V. another family worthily upholds the old name and dignity, and makes Soap for Kings and Commoners.

A note on Bow Church would hardly be complete unless something was said about the Bells. The oldest in the present peal are dated

### CHAPTER VI.

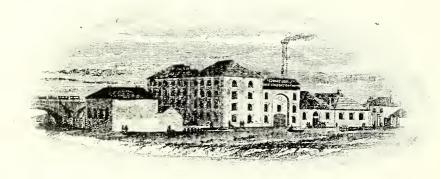
About this time, Cook's "Primrose" was put on the market, and secured immediate recognition for its excellent quality. It was awarded a Medal in 1862, and in 1889 at the great International Exhibition in Paris, it secured the only Gold Medal awarded for Primrose Soaps.

On November 7th, 1862, in the "Illustrated London News" appeared an illustrated article upon Cook's Soap Works and pictures of the interior of the Copper House and Works are reproduced herein.

On the 31st December, 1869, Mr. Edward Cook dissolved partnership with his son, Edward Rider Cook, and retired from business, and a new Partnership was formed under the title of "Edward Cook & Co.,"

memories and our hearts, but throughout this half century, the House of Edward Cook & Co., or "Cook's, London," as it is now called, has continued to progress and has at last secured the supreme honour of a special Appointment as Soapmakers to H.M. King George V.

Several other businesses have been merged into its undertaking; the first was that of E. A. Fontayne &



PREMISES IN 4859.

the partners being Edward Rider Cook, Henry John Cook and William Cook.

We are now within the period of Contemporary History, and the stirring events, the scientific discussions, the terrors of war, the glories of peace and the progress of civilization that have filled the pages of our history, and indeed of the lives of many of us during the last half century, will need no re-capitulation; it is all too fresh in our

Co., of Hoxton, London. This was an old fashioned Tallow Melting business, and was purchased in 1873. It is interesting to recall that this business was run by a lady who used to drive round in a brougham to purchase fat from the butchers. As she shook hands with each on completion of a bargain, and the butchers in those days were perhaps not so particular as they are to-day, it is said that she used to put on a new pair of gloves each day.

In 1875, Cook's acquired the manufacturing business of Williams & Son, Clerkenwell.

In July, 1887, the firm of John Cook & Sons, Tallow Melters of Bethnal Green, who had separated from the Soap business in 1845, again amalgamated with it.

In 1900, the old and well-known firm of Anderson & Cattley was taken over. This very old business can be traced back for many years; it was formerly known as Barlow & Anderson, and prior to that it belonged to Mr. Toulmin. The old recipes and formulæ are still preserved by us, and the famous Curd Soap is made in accordance with them.

In January, 1906, the old established and highly respected Export Soap Business of Edward Beach & Co., Ltd., was taken over.

In 1913, two other old established businesses were acquired, Fredk. J. Hunt & Co., Ltd., (founded 1820) and Geo. Hearn & Co. (founded 1793.)

"Cook's, London," are not only famous for their Soaps, but for their Disinfectants. Not only have they been awarded ten Grands Prix and five Gold Medals at great Exhibitions for the excellence of their productions, but *The Lancet*, England's premier medical journal, after an exhaustive test of all the well-known disinfectants bought upon the open market, proved conclusively that "COFECTANT" (Cook's Disin-

fectant Fluid) was the most effective.

To-day Cook's, London, the Soap and Disinfectant Specialists, Soapmakers by Appointment to Majesty the King, Soapmakers by Special Royal Warrant to their Majesties the King and Oueen of Spain, Contractors to the War Office and the Admiralty, Contractors to the London County Council, etc., have agencies throughout the world, and Harry de Windt, the famous traveller, once wrote "When I strike the spot where Cook's Soap is unknown, I shall realise that I have at last reached the abomination of desolation." Cook's Soap has been found in that almost inaccessible region of Thibet, the land of the Lamas, the home of mystery, and as some would declare, the centre and pivot of occultism, and a well-known war correspondent wrote from that spot, "I believe yours is the first soap in the world that has been applied to these people, and you are to be congratulated that it has stood the test -a supreme one, as you would realise if you could see them." It was this letter evidently that inspired the following:-

<sup>&</sup>quot;" Twas Edmund Candler told the tale— When writing in Thibet

As 'Special' to the 'Daily Mail'— Of funny folk he'd met. One sight, said he, fair tickled me,

I never shall forget How we chased the wild Thibetians And we 'cotched' 'cm,

And we 'cotched' 'cm,
When first I touched their greasy skins
I wished we'd let 'em run.

But Tommy Atkins—bless his sins—
Quite tumbled to the fun;
A brilliant hope—'Cook's Lightning
Soap'—
No sooner said than donc.
For the first time since they struck the
earth
We washed 'em.''

The recollection of this incident reminds us of another tale which was told in the smoking room of a steamer going to Brisbane, by an old man, the owner of several vessels engaged in pearl fishing:—

"It all happened in a moment," said the old man. "The ship struck a part of the reef and went down like a thunderbolt, and we had only time to jump overboard and swim ashore. We were at the mouth of Cloudy Bay, which meant slow roasting alive as soon as the natives got a peep at We were wet, hungry and miserable, with nothing to stay the pangs of hunger. As daylight dawned I saw a case slowly drifting to shore. In a moment we were all wading and swimming to secure the treasure. We had it on shore in no time, and prising it open with our fingers found it filled with soap. We bemoaned our hard luck in emphatic language.

"'Close round the case, boys, they're coming!" I shouted, as I saw fifty mop-headed savages armed with spears, bows, and arrows rushing towards us. At 15 yards' distance they paused, and their chief came out to talk to us. I grabbed an armful of soap tablets and ad-

vanced to meet him. His eyes lightened as he saw the amber-like cakes on which the sun was shining. Novelties, when they take, mean success.

"Going straight up to this maneater. I offered him a cake. He took it, smelt it, and tasted it. Evidently he did not like its taste, for he scowled at me. By signs I showed him how to use it. The Papuan is fond of washing himself, and my pantomime took his fancy. Seeing a stream of fresh water I led the chief to it. First washing my own hands I gave him the tablet. He did as I had done and was delighted. for the next ten minutes there was a scrubbing among those copper skins. Their weapons were thrown down, and they lathered one another, and then tossed the water over their bodies.

"We were saved, and made on the spot medicine men of the tribe. The pictorial advertisements of the soapmakers were used to decorate the idol house. Two weeks afterwards we were rescued by an English warsloop."

#### CHAPTER VII.

A History of Soap would not be complete without mention of Perfumery, as it forms a most important part of the modern Soapmakers' business. Although the Perfumer's Art, as we now understand it, has only been applied to our own trade within the last half a century, excepting such soaps as Brown Windsor, etc., yet the knowledge and use of at least the natural odours extends back to the remotest depth of time, in fact it is not unreasonable to imagine their use as being contemporary with the discovery of the value of foliage as clothing, for surely if the Tree had



MODERN DISTILLING PLANT Reproduced from The Volatile Oils

fruit it had a flower? Hence perhaps a short outline of the History of the progress of the use and preparation of the various perfumes, may not be without interest to those of us who, if we do not at least handle these products which play so large a part in our business, at any rate enjoy them in the use of the finished article.

Even in such modern times as 4000 B.C. we have records left by the Egyptians, not merely of the use of the natural perfumes, but actually

also of what appears to be the distillation of the odoriferous plants and gums. Although the Egyptians were well acquainted with the preparation and use of perfumes, they did not themselves grow or obtain the raw spices and gums, but imported them from the further Eastern countries. that is to say by sea from the coasts of Persia and India, for which purpose they made canals across the desert, which exist to this very day, or by camel caravan from the far distant valley of the Oxus, lying to the north of the Great Himalayas, and which has probably changed but little, since the very names remain the same, to wit, Bocara (Bokhara), Maracanda (Samarkand), Cabura (Cabul).

With the decline of the Egyptians the centre of civilization shifts westward to Greece, which, after a period of good honest citizenship culminating in a brief spell of the most perfect form of cultivation and civilization ever witnessed in History, fell into a state of degradation brought about by the adoption of Egyptian luxury and its attendant vices, speedily displacing Athens as the centre of the World by sterner Rome.

During this period the Perfumer rose to great eminence, as his products were required for many purposes, religious, personal, sanitary and even monetary. The temples of

the manifold Gods stood on every side, every house had its altar, on every altar stood the censor of smouldering incense.

Every Grecian spent some hours of his day in the magnificent Thermae (Hot Baths), where after his bathe, he was massaged and perfumed with the costliest unguents; no feast was complete without the most lavish use of perfumes, chief among them the powerful oil distilled from the sandal-wood tree Tzula Indika as they called it.

Although the Romans adopted the perfumery habit from the Greeks, they did not largely increase the knowledge of the Art.

And now comes the long night in the history of civilization following upon the brilliancy of the Greek and Roman day, and it is not until the 8th or 10th centuries of the Christian Era that the dawn breaks again with the Arabian School. At Baghdad, Damascus and Constantinople, then the great commercial centres of the world, the Arabian Alchemists were busy discovering the lost art of distillation. Some idea of the estecm in which perfumes and flowers were now held is given by the beautiful quatrain of the great Persian poet, Omar Khayyam, when giving instructions for his burial in a garden: —

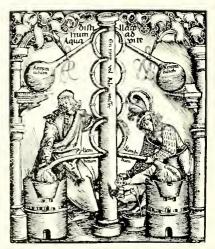
"That ev'n my buriedashes, such a snare Of Perfume shall fling into the air As not a True Believer passing by But shall be overtaken unawares." and again:—

"Where'er the Rose or Tulip scents the air,

The Lifeblood of a King has ebbed forth there,

And every Violet that deeks the earth Was once a mole upon a check so fair."

In the literature of this period we find in the writings of Nonus Theophanes, the Physician of Michael VIII. in Constantinople; Scrapion, Physician to the Caliph Ebn Attafin



PERFUMERY STILL 400 YEARS AGO.
Reproduced from "The Volatile Oils."

of Morocco and Abn Dchafar Achmed; mention made of the distillation of roses, rose oil and camphor oil, and the preparation from these of rosewatcr, attar, and camphor.

In the 13th century came the invasion of Europe by the Mongols (Chinese), and the fall of Arabian civilization, then the Crusades and the establishment of the Romish

Church as the great centre of learning and civilization, here in the great monasteries throughout Europe the art of distillation was studied not so much perhaps from the point of view of perfumery as of liquer and cordial making. Thus the great Cardinal Vitalis de Furno at the beginning of the 14th century declared alcohol to be the true panacea, Anoldus Villanovus in 1250 describes the distillation of rosemary and sage oils. Sancto Amando. bitter almond (named after him), rue and cinnamon oils.

And now in the 15th and 16th centuries comes the discovery of the circumnavigation of South Africa and of the New World, and the scene shifts once more, from Rome to Paris and Germany, and in the year 1582 we find a list of drugs and spices published at Frankfort-on-Main, mentioning no less than 42 distilled oils, and in 1507 Hieronymus Braunschwig gives us our first printed composition of distilled oils in a mixture called "Oleum Benedictum," consisting of rosemary, olibanum, mastic, ammoniac, galbanum, opoponax, cloves, cinnamon and turpentine.

From now on to the 18th century, Germany retains the lead so far as the knowledge of the means of productions is concerned, whilst France and Italy become the largest users. By this time all the better known oils, have been discovered, and we can now, from the various historical documents extant, divide their history roughly into three periods, although it must be borne in mind that it is probable that many of these perfumes were known and in use at earlier dates.

First Period (up to 1500). The age of fragrant woods, spices, gums and sweet waters—

Cedar, sandal, costus, juniper, lignaloes, orris, cinnamon, nutmeg, angelica, cumin, carraway, lovage, macc, coriander, benzoin, mastic, frankincense, storax, rose, rosemary, spike (lavender), sage.

Second Period (1500 to 1600). The age of distilled (volatile) oils—

Horehound, asafoetida, basil, mclissa, thyme, origanum, marjoram, chamomile, spearmint, cloves, myrrh, pennyroyal, sassafras, wormwood, hyssop, zedoary, saffron.

Third Period (1600 to 1700). The age of cultivation—

Orange (citrus) lemon, bergamot, lavender, valerian, neroli.

During the 18th century interest centres chiefly in the blending of perfumes and it was at this time that the famous Eau de Cologne made from "balm (melissa) lemon peel and lavender," was invented by Johann Maria Farina of that City.

With the coming of the 19th century, begins the careful preparation

of the natural oils such as we are now accustomed to, and with it not only a better knowledge of their nature but the discovery, that for the most part they consist of mixtures of highly complex chemical bodies, the systematic study of which has resulted in the establishment today of large works, chiefly in Germany and Switzerland, presided over by scientists of the profoundest

A good example of the different forms of preparations may be found in two of our justly famous Soaps, "Rivera" and "Throne"; the recipe for the perfume of the former consisting of the choicest natural oils distilled from flowers or fruits and fixed, as it is termed by perfumers, by the addition of tinctures of musk, civet, etc., that is to say, animal secretions, whilst on the



attainments, where the natural flower oils are so worked upon and treated as to yield perfumes of a chemical nature of an intensity of odour so great that it is difficult to express except by mathematical means, as for example, duodecylic aldehyde, a perfume which it has been proved exists in the odour of fresh violets, but which if used in less dilution than 1 part in 50,000 becomes offensive.

other hand the latter is composed from oils which have been selected by learned chemists and subjected to the most rigid examination so that all the grosser inodorous portions have been rejected, in consequence the intensity of perfume is so great that but the smallest quantities are necessary to produce that beautiful sensation of Spring flowers we know so well.

The pitch to which the examina-

tion of odours has been carried, and the consequent awful nomenclature with which the poor perfumer is now confronted, may be gathered from the fact that recently one of the characteristic odours of the delightful Heliotrope or Cherry Pie of the English Cottage Garden has been isolated and identified as

"Monochloroprotocatechuicaldehyde."

The illustrations and many of the dates, etc., are reproduced in this chapter from the wellknown book "The Volatile Oils."

On the opposite page a photograph appears of a Box of Cook's delicious Perfumes, "The Breath of the

Flowers," and the testimonials appearing on page 40 and following pages from some of the leaders of Society, testify to the popularity which their merit has secured for them.



#### CHAPTER VIII.

To return to the personal history of our House, and its Managers, our history must inevitably record the passing away of some who were dear to our hearts, for to look back over three score years is to see many milestones on Life's Highway, where

> dear ones have broken their journey and taken their last long rest.

> Edward Cook, of Crix, Hatfield Peveril, son of Edward Cook, of Norwich, Lynn, and London, retired in December, 1869, and died on the 21st April, 1886.

From the 31st December, 1869, the three brothers, Ed-



EDWARD COOK, ESQ.

ward, Henry and William, owned the business, and in 1872 they were joined by Samuel Hall as scientific partner.

Edward Rider Cook, eldest son of the late Edward Cook of Crix, Hatfield Peveril, and of Bow, was born on the 4th June, 1836, and educated at St. Olave's Grammar School, City of London School, and University College, London. At the age of 17, he abandoned a scientific education, for which he had a great liking, in order to assist his father in business. At the age of 22, he was taken into partnership in the firm of Edward Cook & Co., first at Goodman's Yard, Minories, and afterwards removed to Bow.

He married in 1860. Edith. daughter of the late Thomas Piper, of Woodford House, who died on the 4th January, 1865. leaving three children. He married the second time in 1873. Ellen. daughter of the late Isaac Leonard, of Clifton, who had seven children.

He was M.P.

for West Ham (N) from 1885 to 1886, and adopted Liberal Candidate for North Wilts but resigned owing to ill-health. He was J.P. for Essex, Middlesex and London, a member of the Dagenham Sewers Commission, and Treasurer of the Society of Chemical Industry, Member of the Special Executive

Committee of the Imperial Institute, Member of the Poplar Board of Works, and of the Metropolitan Board of Works, and Chairman for the year of the Woodford Urban District Council. An advanced Liberal in Politics, a Congregationalist, and a firm believer in Religious

> Equality, he devoted his whole life to science. especially as applied to business and commerce, and most especially to sanitation and a more healthy mode of living among the poor. In the Cholera Epidemic in 1868, he was Chairman of the Committee in Bow, where he then lived. and worked heart and soul,



E. RIDER COOK, Eso.

day and night, till the plague was stayed. His experience at this time specially directed his attention to the importance of Sanitary Science.

Mr. Cook devoted great attention to all schemes tending to benefit the masses of East and South-East London, particularly in the matter of Thames communications East of London Bridge.

He was one of the principal witnesses before the Select Committee of the House of Commons, and it was largely due to the important evidence which he then gave that

the bill was passed authorising the construction of the Tower Bridge and of the Blackwall Tunnel.

Mr.Cook, and a few other-earnest East-end gentlemen, in conjunction with Sir Joseph Bazelgette, devoted a great amount of time to the Blackwall Tunnel Scheme, and the arrangements for the construction of

the Tunnel were handed over in a very forward state when the London County Council superseded the Metropolitan Board.

He also took an immense interest in the construction of the Woolwich Free Ferry, which was actually completed under the Metropolitan Board of Works, and one of the very first duties of the new Council was to throw the Ferry open to the Public. Similarly, Mr. Cook worked very hard in connection with the Sewage Works at the Barking Outfall. Also in connection with the establishment of the Riverside Fish Market at

Shadwell, as a means of bringing fish right into the very midst of the people of the East End of London.

Mr. Cook was taken suddenly ill on Thursday morning, 18th August, 1898. He lingered until 11.45 a.m. on Sunday the 21st, and died quite peacefully and painlessly, all the Members of his family being present.

of his family being present.

Mr. Henry John Cook, born 2nd January, 1840, took a most active part in the work of building up the world-fame of Edward Cook & Co., Ltd., London. Many improvements in the Works were due to his untiring energy and forethought, and when on the 4th June, 1900, after 40

years' service in the Soap Works, he



H. J. Cook, Esq.

retired, and carried with him the sincere good wishes of the Staff, many of whom had spent a lifetime working side by side with him.

Mr. Henry John Cook has always taken a deep interest in social, educational and religious works, as well as in the world of commerce.



W. Cook, Esq.

Mr. William Cook was born 23rd September, 1843, and died on the 19th August, 1903. At the time of his death he was Senior Director of Edward Cook & Co., Ltd. His kindly and homely disposition endeared him to all the members of the Staff, and his memory is still cherished in

the hearts of those who knew him, and worked with him, through so many years of his life.

Mr. Samuel Hall, F.I.C., F.C.S., married Jane, the eldest daughter of the late Edward Cook of Crix, Hatfield Peveril, Chelmsford. Mr. Hall was one of the original members of the Society of Chemical Industry, and in 1898, on the death of his relative and co-partner, Mr. Edward Rider Cook, he was appointed to succeed him in the Honorary Treasurership of the Society.

Mr. Hall died on the 9th December, 1907, having endeared himself to all those with whom he came in contact during his business career.



SAMUEL HALL, ESQ.

#### CHAPTER IX.

In 1888, Mr. Thos. Alex. Cook, son of Edward Rider Cook, was made a partner after serving seven years in the business.

Mr. Thos. Alex. Cook, who is the present Chairman of the Board of Directors, was born in Bow, 1863, educated at the City of London School (then in Milk Street, Cheapside), and University College, entered the business on the 1st February, 1881, was made a partner in 1888, and became a Director on the flotation of the new Company in 1898, when the business, for family reasons, was turned into a Limited Liability Company. He has also been Chairman of the West Ham Hospital from 1901 to the present year (1915).

Mr. Cook has always taken an active part in Social and Hospital work, and to his initiative is due many of the arrangements on the Works for the benefit of the Employees.

On the 31st March, 1900, Mr. S. Godfrey Hall, son of Mr. Samuel Hall, joined the Board, after serving seven years in the business.

Some of the "Men from Cook's" have been in the service of the Company for nearly half a Century.

Handsome Dining Rooms have been provided on the Works, and various Social and Athletic Clubs formed for the entertainment and welfare of the Staff and Employees.

It is apparent that under the best possible conditions Cook's Soaps, Disinfectants, and other Specialities, are made and distributed to all Markets of the World, helping to bring to mankind the comforts of cleanliness and the priceless blessings of Good Health.

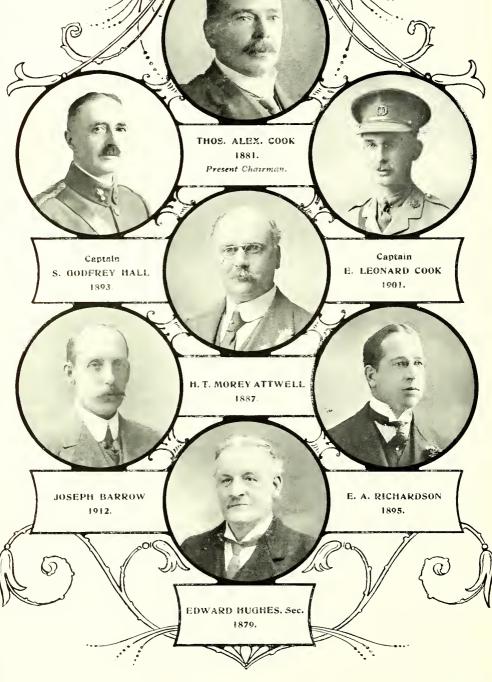
On the 31st July, 1900, Mr. Martyn Cook, son of Mr. William Cook, joined the Board, but to the regret of everyone his service was short, as he died in September, 1904, at the early age of 34.



W. MARTYN COOK, Esq.

THE present Directorate and Secretary have, in their combined services, spent over one hundred and fifty years in connection with Cook's, London, and the dates of their first association with the Company are given on the following page.

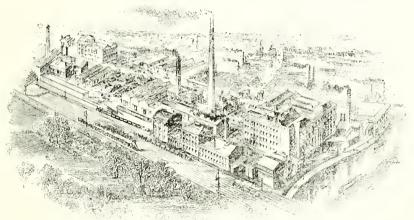




In conclusion, this record of the past years has been written at the request of many of our friends, old and new, who have paid us the honour of being interested in the History of this old established "ALL BRITISH" Soap House.

To-day the Factory at Bow known as "The Soapery" is a busy hive of Industry and constant additions and improvements are being made to the Works.

A new and up-to-date Toilet Soap Factory has lately been completed, and further alterations made necessary by the expansion of the business are proceeding. For the convenience of Merchants and Shippers engaged in the Export Trade, a special Showroom has been opened at 10, Mark Lane, E.C., (with private Telephone to works) where a full collection of Soaps, Perfumery, Disinfectants, Insecticides, Fertilizers, &c., is always



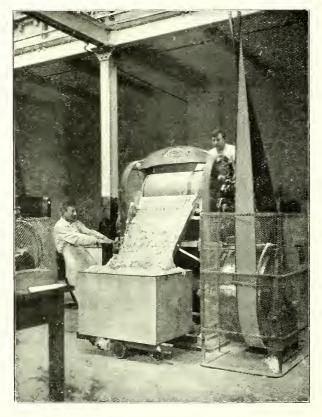
PRESENT VIEW OF WORKS.

The River Lea runs along one side with its direct communication to the Thames. A siding from the Great Eastern Railway carries the goods' trains to and from the actual Packing Rooms, but the main entrances are in Cook's Road.

Miles of tram lines run through the Works, past stables, farriers' shop, wheelwrights' shop, box shops, engineers' department, electrical installation house, Glycerine Dept., Alkali Dept., Mechanicians' Dept., etc., and Modern Automatic Machinery is seen on every side.

on view and experienced Salesmen in attendance. The Partners and Directors have always been noted for their thoughtful care of the well-being of their Employees. They were among the pioneers of Factory Sick Club and Benefit Societies, having started one for their men in the seventies, and they were also among the earliest experimenters in prosperity sharing. They have from time to time reduced the hours of labour and increased the earning power of their Employees, and employment is eagerly sought in their Works.

# Toilet Soap and Perfumery Department.



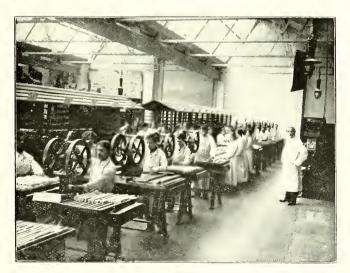
A Modern Soap Mill.

In this Department the delightful Toilet Soaps and Perfumes are prepared and packed for despatch to all parts of the world. See the ribbons of pure, sweet Toilet Soap falling from the Mill to the Carrier, untouched by hand.



A corner of the Milling Room.

Machines driven by Electric Power.



The Stamping Department.

Note the universal use of clean, white smocks.



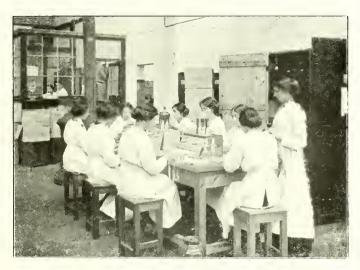
The Wrapping Department.

English Girls working under ideal conditions.



The Packing Department.

Electric Sealing Wax Melters only used to safeguard the Girls against fire.



A Perfumery Bench.

In this picture the Girls are seen putting the finishing touches to a batch of "Throne" Perfume, that delightful Bouquet which has been likened to the fragrance of a Devonshire Cottage Garden on a lovely May morning.



## Edward Cook & Co., Ltd.

have the honour of supplying Royalty, and have received many very flattering testimonials from the Leaders of Society.

#### The Duchess of Somerset.

"The Soaps and Perfumes manufactured by Messrs. Edward Cook & Co., Ltd., gave entire satisfaction."

#### The Duchess of Westminster.

"Is most satisfied with the Soaps, Perfumes, etc., supplied by Messrs. Edward Cook & Co., Ltd."

#### The Duchess of Leeds.

"Would be glad if Messrs. Edward Cook & Co., Ltd., would send her another box of 'Throne' Soap."

#### The Duchess of Newcastle.

"Likes the 'Throne' Soap and would like 6 dozen pieces sent to her house at Worksop, and 6 dozen to her at Forest Farm, Windsor Forest."

#### The Marchioness of Exeter.

"Thinks the Soap is very good, especially the 'Throne' Soap, which lathers well, even in hard water."

#### The Marchioness Camden.

"Finds Messrs. Edward Cook & Co's. Soaps very nice."

#### The Dowager Marchioness of Tweeddale.

"Is very much pleased with Messrs. Edward Cook & Co's. Soaps and Perfumes. She is more than pleased to note that all these goods are of purely British Manufacture, and will gladly extend to them her patronage; as she is anxious to do all in her power to encourage British Trade."

#### The Viscountess Hill.

"Is very pleased with Messrs. Edward Cook & Co's. Soaps and she thinks the fragrant 'Cutaneous' Soap is excellent."

#### The Viscountess Churchill.

"Cook's Soaps are quite excellent."

#### The Viscountess Galway.

"Has great pleasure in testifying to the excellence of Messrs. Edward Cook & Co's. Manufactures, which is so much the more gratifying as it is purely British.

"The Soaps are very pleasant to use, especially the 'Throne' Soap, which makes a very nice lather. 'Throne' Perfume is also very fine, and is prepared with great eare.

"The Viscountess is pleased to send Messrs. Edward Cook & Co., Ltd., the orders for her hospital as she is so satisfied with their splendid assortment of Soap, Shaving Sticks and Disinfectants."

#### The Viscountess Gort.

"Thinks Messrs. Edward Cook & Co's. Soap is very good, particularly the 'Throne' Soap, which is so pleasant to use.

The 'Throne' Perfume is also very sweet, and it is very satisfactory to find these are all produced by British Labour."

#### The Dowager Countess Cawdor.

"Finds Cook's Toilet Soaps are excellent quality."

#### The Countess of Chichester.

"Thinks Cook's Soaps are excellent, and is glad to know that they are entirely of English make."

#### The Countess of Lindsey.

"Considers Cook's Toilet Soaps most excellent; she will be pleased to recommend them to her friends."

#### The Countess of Mar.

"Finds Cook's Soaps excellent."

#### The Countess of Selkirk.

"Likes Cook's 'Cutaneous' Soap, it lathers so well."

#### The Countess of Eglinton.

"Finds Cook's Soap is of a very high standard of quality."

#### The Countess of Kintore.

"Has tried some of Cook's charming assortment of Toilet Soap, and finds it most pleasant to use. She thinks in these days it is most desirable to use British products, specially when they are as good as Messrs. Cook's."

#### The Countess of Verulam.

"Thinks Cook's Toilet Soaps and Perfumes very good."

#### The Countess Temple.

"Has tried Cook's Soaps and Perfumes and finds both excellent and very cheap. She will be pleased to recommend them to her friends."

#### The Countess of Essex.

"Finds Cook's 'Throne 'Soap and Scent both quite excellent."

#### The Countess of Glasgow.

"Thinks Cook's Soap is very pleasant."

#### The Countess Stanhope.

"Recommends very highly the 'Throne' Toilet Soap manufactured by Messrs. Edward Cook & Co., Ltd. She finds it very emollient and agreeable to use, and the tablet lasts well throughout, instead of as sometimes happens, losing its qualities when only half consumed."

#### The Countess of Albemarle.

"Thinks Cook's Soaps and Seents are very nice, especially the "Throne" Toilet Soap."

#### The Countess of Aylesford.

"Has tried Cook's Soaps and Perfumes, and can safely say all those she has tried are very good, and she will be most happy to go on using them."

#### The Countess of Carnwath.

"Is delighted with Cook's British-made Soap, and finds it most pleasant to use."

#### The Countess of Chesterfield.

"Thinks the 'Throne' Soap is very nice, with a very sweet smell."

#### The Countess of Carnarvon.

"Finds Cook's Soaps quite excellent."

#### The Countess of Cavan.

"Considers Cook's Soaps excellent,"

#### Lady Annaly.

"Likes Cook's Soap very much."

#### Lady Dunedin.

"Has pleasure in testifying to the excellence of the Soap and Perfumes made by Messrs. Edward Cook & Co., Ltd., the Royal Soap Makers."

#### Lady Oranmore and Browne.

"Is delighted with Cook's Soap, and thinks it an excellent thing that a British Firm can turn out such very good material."

#### Lady Llangattock.

"Has much pleasure in recommending the choice Toilet Soaps and Perfumes manufactured by the Royal Soapmakers, Messrs. Edward Cook & Co., Ltd."

#### Lady Rotherham.

"Finds Cook's Soaps and Perfumes extremely good, and will have much pleasure in recommending them as far as possible."

#### Lady D--

"I have used your Soap and found it extremely pleasant. I consider it excellent."

#### Lady Lynden.

"Finds Cook's Soaps beautifully soft and cleansing."

#### Lady Dunally.

"I am much pleased both with Messrs. Edward Cook & Co's. 'Throne' Soap and Perfumc."

#### Lady Estcourt.

"Has much pleasure in using Cook's Soaps and Perfumes."

#### Lady Grantley.

"Likes Cook's Soap very much; it makes the hands so soft, and is so beautifully scented. The 'Cutaneous' Soap smells of freshly picked lavender."

#### Lady Garvagh.

"Testifies to the excellent quality of Messrs. Edward Cook & Co's. productions."

#### Lady Newborough.

"Finds Cook's Soap very good."

#### Lady Teynham.

"Has been using 'Throne' Soap, and finds it very excellent and nice to use. Lady Teynham also thinks the 'Throne' Perfume quite delicious.

"In a country house where she was staying, the Hostess liked it so much that she begged Lady Teynham to give it to her."

#### Lady Byron.

"I have much pleasure in stating that after having tried all the most luxurious Foreign Soaps, I can recommend Cook's fragrant 'Cutaneous' Soap as the most delicious skin balm I have ever used."

#### The Lady Mowbray and Stourton.

"I like Cook's 'Throne' Soap, the seent is very pleasant and retains its freshness."

#### The Lady North.

"Much appreciates Cook's 'Throne' and 'Cutaneous' Soaps, and the 'Throne' Perfumes. They are all their makers profess them to be."

#### The "Ladies' Field" says:-

"'Throne' Soap combines the famous qualities of purity and neutrality for which Cook's Soaps have always been noted. It is a Soap specially suited to delicate and sensitive skins, as it contains no poisonous colouring matter and all irritating perfumes have been carefully excluded."

## THE "LANCET,"

#### England's Premier Medical Journal, says:-

"Cook's Soaps are typical of the refinement which modern Soapmaking has reached; to a large extent laboratory control has brought about this desirable result."

"The basis of Cook's Soaps is of excellent quality, in which fat and alkali are balanced as closely as skill and scientific manipulation in manufacture will allow."

"They contain the highest possible percentage of chemically pure Soap without any trace of free alkali, according to the delicate tests we have tried."

"Both chemical and practical tests give satisfactory results with Cook's 'Solace' Shaving Soap. It is perfectly neutral, yields an excellent creamy lather, and is without irritating effects on the skin. Moreover, it is antiseptic."



# A FEW WORDS ON AN IMPORTANT SUBJECT.

OR many years in the house of "Cook's, London," great attention has been given to medicated Soaps and Disinfectants.

There is, unfortunately, a great want of care exercised by a large proportion of the community in purchasing Disinfectants.

Anything with a smell and a well-sounding name is good enough for some people.

But one smell that can only hide another smell and cannot destroy the bacteria is a positive danger to life, as it lulls us into a sense of false security until it is too late to cope with the disease.

Cook's Disinfectants have been pronounced by learned Bacteriologists and Chemists to be the best and most powerful in coping with disease germs.

"THE LANCET," when preparing a table of the more important and widely advertised Disinfectants with their germ-killing strengths as compared with Carbolic Acid, put Cook's "Cofectant" Disinfectant Fluid on the Top of the List. It was found to be the most powerful disinfectant obtainable.

Not only is it a preventative and protection against the dreaded bac-

teria—invisible to the naked eye—of Typhoid, Diptheria and other bacilli, but it is certain death to house vermin, although when used as directed it is quite harmless to human beings.

We have received the following letter from the Medical Officer of Health of an important Borough near London:—

#### " November 10th, 1911.

"In connection with the Housing, etc., Act, we have recently dealt with some very old houses, the construction of which is chiefly wood, lath and plaster. The houses were found to be infested with bugs, and owing to the nature of the materials used in the construction of the property, it was a difficult matter to reach the nests and breeding places of such vermin. Formalin fumigation and spraying, and sulphur fumigation apparently had no effect on the vermin.

"Eventually we had the inside walls, floors and ceilings, and all crevices, etc., sprayed with your disinfectant at a strength of 1 of "COFECTANT" to 80 of water.

"This acted in an effectual manner, not only causing the death of those insects visible, but, as the liquid penetrated into the crevices and behind the woodwork, it was the means of bringing out the vermin from their breeding-places. A second spraying then completed their demise. Internal woodwork and defective plaster were afterwards stripped, and the surfaces subjected to another spraying.

"I am pleased to say that, judging by inspections made at a later date, the use of your "COFECTANT" Fluid applied by means of a spray has had a most beneficial effect in ridding the property of the vermin."

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The report of Drs. Woodhead and Archibald on Bacteriological Experiments on Cook's "Asepso" (Biniodide) Soaps in the "Journal of the Society of Chemical Industry," after naming *in extenso* organisms destroyed by the action of "Asepso," concluded as follows:—

"The other antiseptic and ordinary soaps used in similar proportions failed in most instances to prevent the growth of the micro-organisms." These experiments were made with the 3% "Asepso," but weaker strengths--1% and  $\frac{1}{2}\%$ —are made for ordinary toilet purposes.

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After I commenced using your Soap, within one month there was hardly a case in the building, and I had 64 cases at the time; several appeared to abort in a few days, and I have had cases which resisted all other treatments for months. I could if you wish, send you statistics proving the efficiency of "Ascpso" Soap in the treatment of this most obstinate disease (exfoliating dermatitis).

WE go to press with this History in the month of August, 1915. For the past twelve months our Country has been at war, and over one hundred of our Co-workers—including two of our Directors—are serving with the Colours.

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is a bluish purple highly volatile and odorous fluid, with a definite therapeutic action in every type of Tuberculosis. It is a homogeneous chemical preparation, elaborated during 1895 to 1909 by the late Chevalier Cæsar Ballabene, M.D., and was first introduced to the medical profession throughout Great Britain and the Colonies in 1910.

The Pneumosan treatment in Tuberculosis, whilst not absolutely infallible, surpasses in efficacy any other known treatment. If the dosage is administered as suggested in the "Directions," accompanied by the requisite dietetic and hygienic conditions, the recoveries according to tabulated figures (vide "Lancet" of December 11th, 1915, page 1295), number 80 to 90 out of every hundred. (The only selection that need be made to maintain this average consists in excluding cases which are, for one reason or another, hopeless from the start). Moreover—after 1 to 3 months' treatment most of the subjects are enabled to resume their ordinary occupations.

#### PRINCIPAL CONSTITUENTS.

1. Tetra-methylthionine hydrochloride; 2. Valeric Acid 0.765 per cent.; 3. Codeine 1.427 per cent.; 4. Phosphoric Acid 0.38 per cent. (for full analytical report *vide* "Lancet" of October 11th, 1913, page 1070).

#### DOSAGE.

The adult dose is from 4 to 10 minims once a day (for children less in proportion to age and general condition), applied by intra-muscular injections in series of 10. (Full course set out in folder attached to each vial.)

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Bactericidal, tonic, febrifuge, analgesic, and alterative; fosters constructive metabolism; innoxious and non-caustic; does not produce local irritation or constitutional derangement; toleration perfect; inhibitory action rapid; a powerful prophylactic; readily carried by circulation to focus and thence eliminated by the lung, the fæces, and urine; retains its active principles for years in all climates; may be used in conjunction with or without sanatorium treatment.

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Every type of Tuberculosis, lupus, neurasthenia, rheumatism, rheumatoid arthritis, sciatica, anæmia, malaria, scrofula, acute and chronic bronchitis, asthma, and some other bacteria-born diseases. (The administration of the drug may be analogical to that recommended in the folder against Tuberculosis, in every disease, where the use of Pneumosan is indicated.)

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#### "THE LANCET"

of August 8th, 1914 (page 372), and of December 11th, 1915 (page 1295), contains instructive articles on the use of Pneumosan in Pulmonary Tuberculosis from the pen of an eminent specialist, who subjected the drug to a very severe test. They deal with the cases of 103 dispensary patients, and constitute a noteworthy addition to the literature of this deeply interesting subject.

#### "THE MEDICAL TIMES" for November 6th, 1915, writes:

"In previous articles we have quoted almost exclusively from reports of cases of pulmonary tuberculosis, but it is worthy of record that Pneumosan is strikingly successful when used in other tuberculous conditions, such as tuberculosis of the cervical abdominal glands, tubercular disease of the bones and joints, and even such intractable diseases as lupus."

#### "THE CHEMIST & DRUGGIST"

of July 11th, 1914, comments: "Pneumosan has been tested in various sanatoria in this country and abroad, and reports by competent authorities on its use show that it is a remedy worthy of a place in materia medica."

Other annotations may be found in the "British Medical Journal," dated December 30th, 1911 (page 1713), in the "Lancet," March 30th, 1912, and October 11th, 1913; in the "Medical Times" of July 8th and 15th, August 26th, September 30th, November 4th, 1911, January 20th, 1912, July 19th, November 29th, 1913, May 30th, July 25th, October 31st, 1914. August 28th, September 4th and 25th, and October 2nd, 9th, 16th, 23rd, and November 6th, 1915; in "Guy's Hospital Gazette," "The British Journal of Tuberculosis," "The Medical World," etc., etc.

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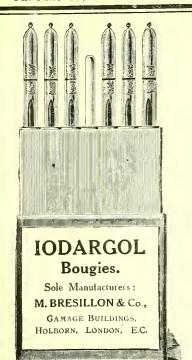
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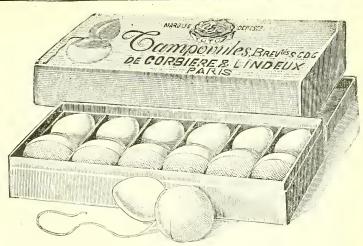
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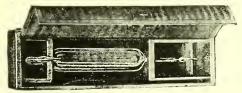


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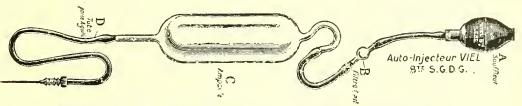
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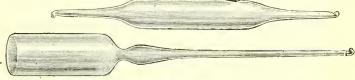


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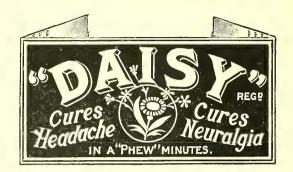
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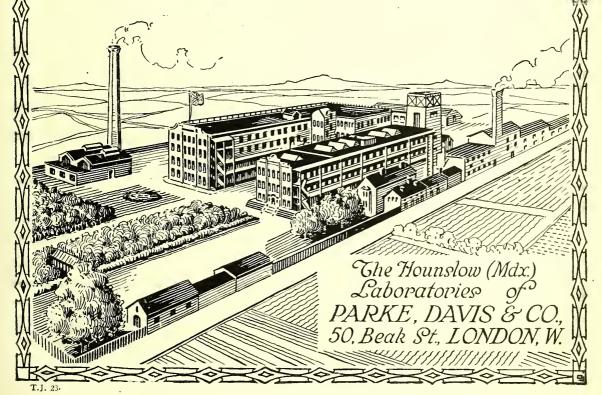
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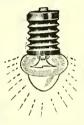
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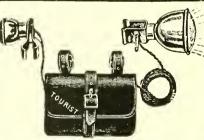


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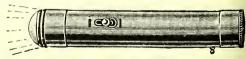


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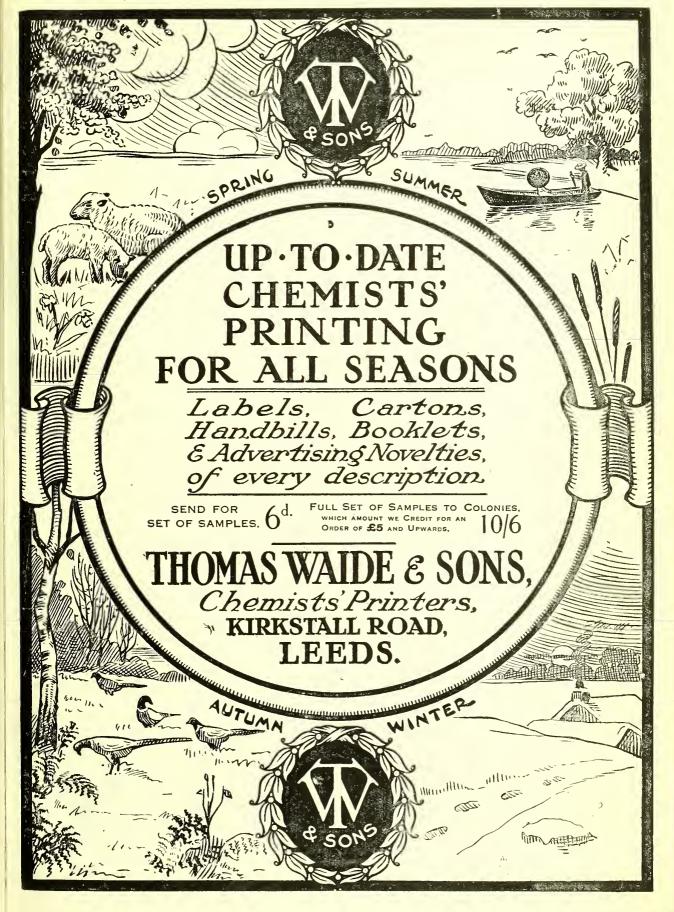
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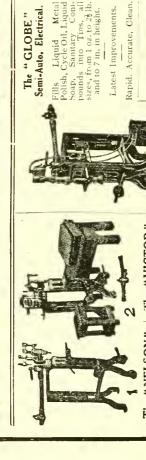
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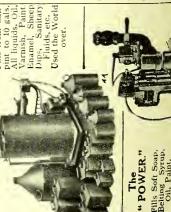
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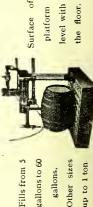
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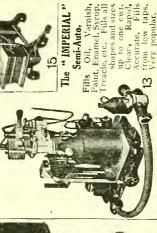
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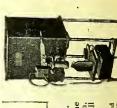
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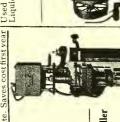
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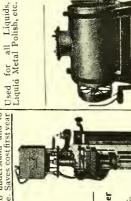
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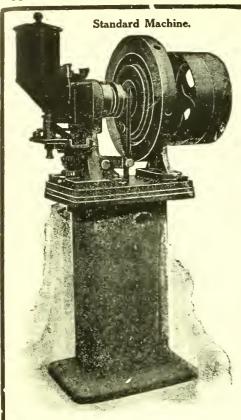
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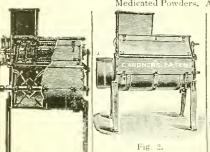
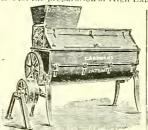


Fig. 1. Sizes for Hand Use.



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Fig. 4 Large Capacity Power-driven Machines.



Fig. 5. For Counter use and small quantities.



GARDNER'S Patent "RAPID" SIFTER, MIXER, AND CRUSHER. Fig. 6.

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Fig. 8.

Open Bottom Pattern.

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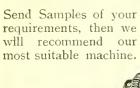


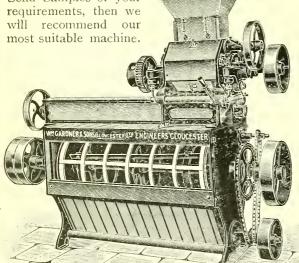
Fig. 10





Fig. 12





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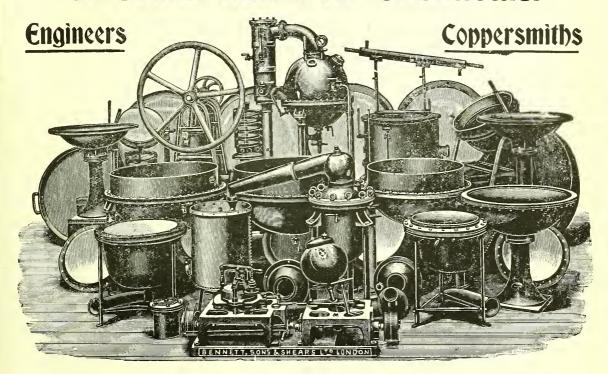
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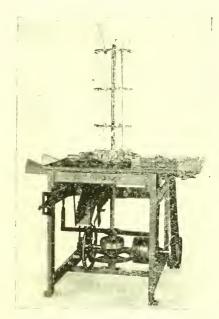
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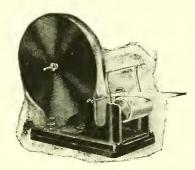
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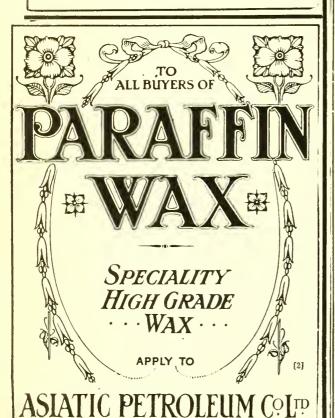


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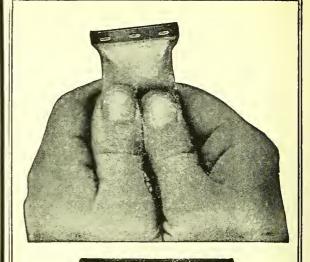
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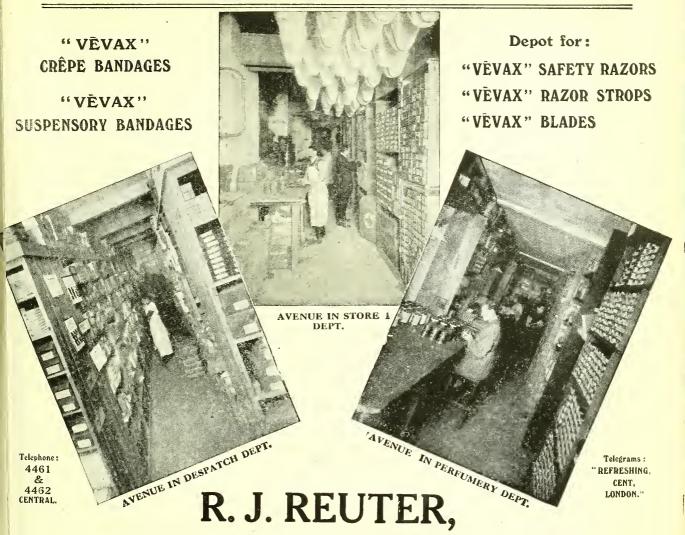
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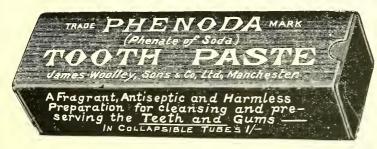
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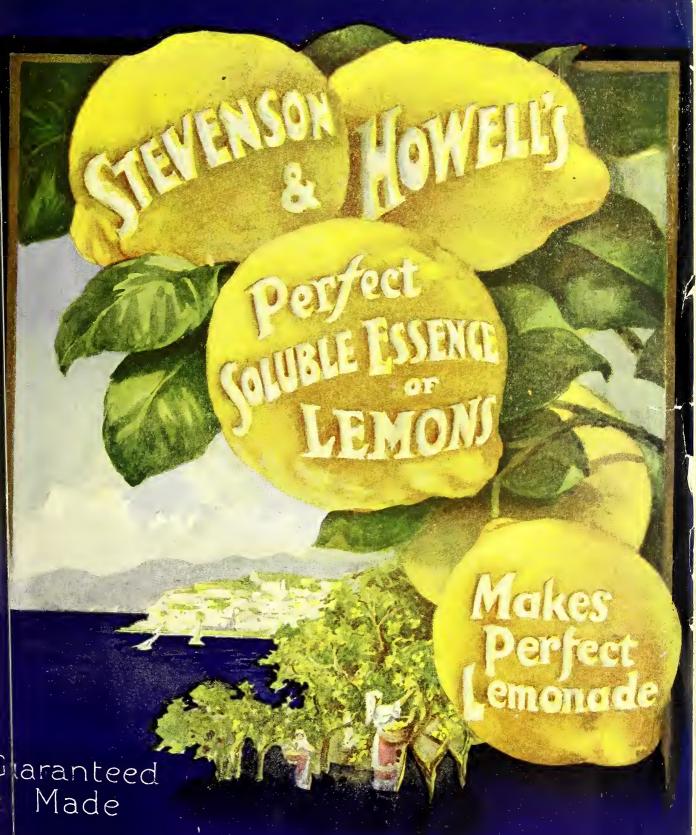
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1 Cwt. Bicarbonate.

Minimum quantity of Water: 17 to 20 Gallons.

3 Gallons (say 68 lbs.) Sulphuric Acid of 167 Twaddell.

These quantities give about 58 lbs. Pure Carbonic Acid Gas.

THE METHOD OF CHARGING the Generator, and of running in the Acid, is exactly the same as when Whiting, Chalk, &c., are used; no agitation is required except at the very end of the charge. About 50% more bottles (or half as many again) will be charged than with the same weight of Whiting.

A Generator capable of holding 1 cwt. of Whiting, 36 gallons of Water and 64 gallons (1 cwt.) of Acid can be charged with 2 cwts. of Bicarb., 34 gallons of Water and 7½ gallons  $(1\frac{1}{4} \text{ cwt.})$  of Acid. This will yield **Three Times as much Carbonic Acid Gas** as is given by the Whiting process, and consequently three times as many bottles per charge an immense advantage where space is limited and when business is brisk.

It will be seen from the proportions given above that only about two-fifths of the Acid and two-thirds of Bicarbonate (weight for weight, as compared with Whiting) are required to produce the same amount of Carbonic Acid Gas.

The proportion of Water can be varied according to circumstances. With the above proportions the liquor from the Generator (which liquor is always perfectly clear and free from sediment) will, if run into tubs or into crystallising pans, crystallise in about two hours at ordinary temperatures. The Crystals obtained are Glauber Salts, a readily saleable article, in place of the mud from Whiting, so disagreeable to handle and so difficult to get rid of.

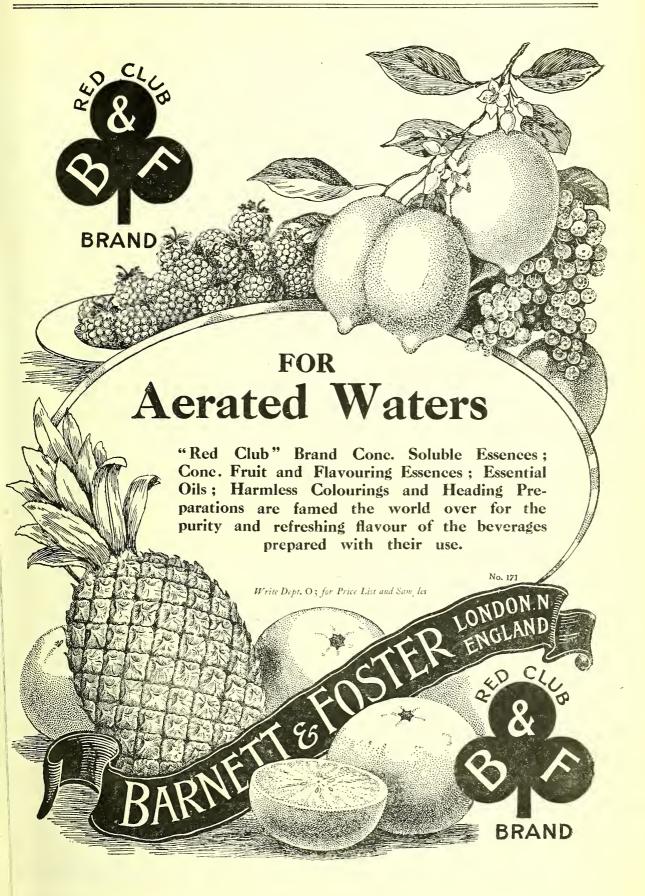
When the minimum quantity of Water is used, the liquor should not be allowed to stand in the Generator after work is finished, or the Glauber Salts will crystallise in it and cause delay by having to be dissolved out with water, or otherwise removed, before a fresh charge can be inserted. If it is not wished to recover the Glauber Salts, fill up the Generator with water after the charge is worked off, or work with more water in the original charge.

If the residual liquors are disposed of by pouring them down a drain, it is advisable first to dilute them with water, or to pour water down the drain, either at the same time as, or immediately after, the liquors, in order to prevent a possible blockage of the drain-pipe by crystallisation.

Mineral Water Manufacturers who use the above process might, with advantage, send their Glauber Salts to the firms who supply them with their Acid.

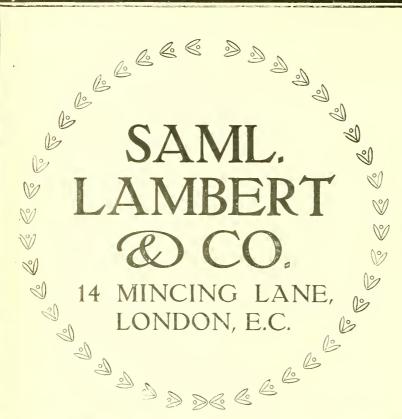
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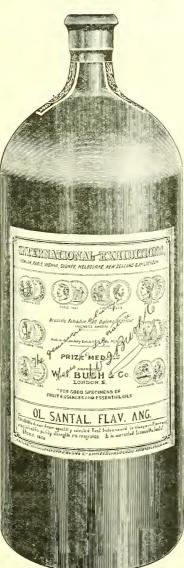
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- Ol. Layandulæ.
- Ol. Limonis.
- Ol. Menthæ Pip. Ang.
- Ol. Menthæ Viridis. Ang.
- Ol. Myristicæ Ang.
- Ol. Rosæ.
- Ol. Rosmarini.
- Ol. Santali Flav. Ang.
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# THE PREMIER Lavender Water

(ESTABLISHED 1749)

POTTER & MOORE
DISTILLERS - MITCHAM

9d. size, 6/6 doz.

1/6 ,, 13/- ,,

2/6,, 22/- ,,

3/9 ,, 33/- ,,

6/6 ,, 54/- ,,

12/6 ,, 96/- ,,



FLASKS,

9/-

per doz.

SOLE PROPRIETORS:

W. J. BUSH & CO., LTD.

ASH GROVE, HACKNEY LONDON - - N.E.



# Boake Roberts Co..Ltd.. STRATFORD, LONDON, E.

FOR

# SOLUBLE ESSENCES. ESSENTIAL OILS. OIL LEMON, ORANGE, BERGAMOT, &c.

If you wish to make first-class Aerated Waters of unimpeachable purity, use

### BOAKE ROBERTS' ESSENCES.

### Finest Soluble Essences.

LEMON.

GINGER ALE.

ORANGE.

STONE GINGER BEER.

GINGER.

KOLA CHAMPAGNE.

RASPBERRY. LIME JUICE & SODA.

STRAWBERRY. LEMON SQUASH.

PINEAPPIF

&c.. &c.

Golden Caramel Colourings, &c.

# EAU DE COLOGNE.

Manufactured in Great Britain.

LESCOL BRAND No. 58.

FINEST VALUE IN COLOGNES ON THE MARKET.



Very acceptable and necessary

# PRESENTS FOR THE SICK.

IN

1-oz.

2-oz.

4-oz.

2-oz.

4-oz.

½-pt. wickered. 1-pt.

Quart wickered.

SHOWCARDS SUPPLIED.

Please write for our latest Price List—Illustrated by Colour Photography.

Finest Perfumery to suit all markets & requirements

LINES FROM A 1d. TO A GUINEA.

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Lomond Grove, CAMBERWELL, LONDON, S.E.

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# STAFFORD ALLEN & SONS

LIMITED

ESTABLISHED 1833

Distillers and Importers

of

# Essential Oils

Almond

Anise

Bay

Bergamot

Caraway

Cardamom

Cassia

Cinnamon

Citronella

Clove

Coriander

**Eucalyptus** 

**Fennel** 

Geranium

Ginger

Gingergrass

Lavender

Lemon

Lemongrass

Limes

Neroli

Nutmeg

**Orange** 

Orris

Palmarosa

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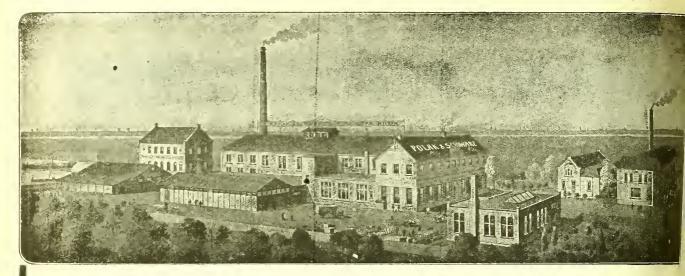
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ALDEHYDES:

 $C_8$ ,  $C_9$ ,  $C_{10}$ ,  $C_{11}$ ,  $C_{14}$ . ALDEHYDES C12: LAURINIC, — METHYLNONYLACETIC ANTHRANILATE OF **[METHYL** CITRAL CITRONELLAL CITRONELLOL GERANIOL ROSE GERANIOL FOR SOAP LINALOOL ROSENEON SAFROL TERPINEOL VIOLETS 100% ALL KINDS OF ESTERS, &c.

### **ESSENTIAL** OILS-

OF:

ANGELICA ROOT COGNAC, GREEN-WHITE COGNAC, ARTIFICIAL CORIANDER FENNEL (SWEET) GINGER MUSTARD, GENUINE NUTMEG PETIT GRAIN SANDALWOOD, W.I., &c.

### FLOWER OILS-

ACACIA CARNATION FOUGERE HELIOTROPE JASMIN LILAC LILY OF THE VALLEY NARCISSUS NEROLI ROSE RED ROSE MOSS ROSE ORIENT VIOLET WALLFLOWER, &c.

N. V. POLAK & SCHWARZ'S ESSENCEFABRIEKEN

**ESTABLISHED** 

ZAANDAM-1889-HOLLAND

### SESQUITO-LEMON. SESQUITO-LIMES. (Registered) (Registered)

SESQUITO-ORANGE

Contain no added preservatives or adulterants. They are the actual flavouring principles taken from the Essential Oils. They are not artificial, but true fruit flavours.

Are completely soluble in small quantities of alcohol, and will produce Soluble Essences by merely dissolving same in proof spirit.

Can be mixed with the Essences you are using, and will effect great economies without making any perceptible change in the flavour. • For fortifying Tinctures they are invaluable. One ounce added to a Winchester of Tincture or ordinary Soluble Essence will make same twice as strong,

Are uniform in quality. Oil of Lemon and Soluble Essence of Lemon vary by reason of same not being always obtained from

Fruits of same quality and age. SESQUITO-LEMON, etc., are always brought up to highest standard and are always the same, every molecule having very powerful flavouring qualities.

Are being used by firms well known throughout the world, and constant repeat orders give us confidence in offering same to others with a guarantee of absolute satisfaction.

Not only provide a way of cheapening the cost of production of Aerated Waters, Syrups, etc., but they also improve the quality. They impart a delightful aroma, and make the beverages a pleasure to drink.

Are specially adapted for Export Trade, producing a great saving of packages, freight, etc. We are prepared to send same by Insured Post to any part of the World free, when remittance accompanies order, or where C.O.D. service operates.

Are being imitated. Buyers, beware! The only genuine bears our registered "PEAK BRAND" Label

MARK.

TRADE

### PRICE.

Lemon, 12/6 oz.

Limes, 7/6 oz.

Orange,

25/- oz. 50 oz., 6d.

oz. less.

100 oz.

1/- oz. less.

One Ounce added to a Winchester Soluble Essence MAKES SAME DOUBLE STRENGTH.

### PRICE.

Peppermint, 2/6 oz.

Aniseed,

2/6 oz.

Cloves,

2/6 oz.

50 oz. 3d. oz. less.

100 oz.,

4d. oz. less.

# VANOLEUM

12-lb.

SOLUBLE IN WARM WATER.

One (1) Pound of Vanoleum equal to Two (2) Gallons of Very Best Vanilla Essence.

1-oz. Sample supplied for 2/-. Post Paid.

SUPERSEDES VANILLINE SAVES ALCOHOL.

Guaranteed to conform with requirements of Food and Drugs Act.

OBTAINABLE ONLY FROM

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(Regd. Pat. No. 310716).

THE IDEAL FRUITY LAXATIVE IN PASTILLE FORM.



DELICIOUS RELIABLE EFFECTIVE STEADY PROFIT-ABLE SELLER

## FROZOCLONE

(Regd.)

THE WORLD'S GREAT PERFUME AND REFRESHER IN SOLID FORM



RETAILS 2/-(P.A.T.A. MINIMUM 1/9)GIVING AT LEAST 6D. PROFIT ON EACH SALE

FROZOCLONE is a convenient form of the finest Eau de Cologne, refreshing when rubbed on the forehead, equally pleasant as a smelling bottle, invaluable in a heated atmosphere and when motoring.

### RISICCOL (Regd.)

(Demuth's Castor Oil Powder) prepared from the purest Castor Oil, absolutely tasteless, yet possessing all medicinal properties

### MUTHOL (Regd.)

A deficiously palatable cream containing 95% purest medicinal Petroleum Oil B.P.

### FRU-MUTHOL (Regd.)

Prepared from Paraffinum Liquidum B Pand Fruit Juice in the form of a Jelly. Raspberry, Lemon and O ange Flavours.



SOUND SPECIALITIES CARRYING A GOOD PROFIT Full Particulars and Advertising Literature on Request

### 68 SALUSBURY ROAD, LONDON : N.W.

Telegraphic Address: "Boulbene London."

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### ROSE SIMILE S.A.S.

A rose odour of great strength and incomparable delicacy.

13/6 PER OZ.

Put up in 1 oz., 4 oz. and 8 oz. bottles.

Prepared by

STAFFORD ALLEN © SONS, LIMITED,

Distillers of Essential Oils, &c.

COWPER STREET, LONDON, E.C.

ESTABLISHED 1833.

Some of the

80

# (Trade Mark Registered)

99 Specialities and their Prices,

> which are subject to change without notice.

V	F.	T . I	LO	XZ.	1.
- 1	_				

PENNY TI				7/3	per gross
_ TWOPEN	NY TINS			13/6	11
TWOPENI No. 1 size, in	boxes of 1	gross		19/-	
۳ 1	3	dozen		19/3	
H ., 1 ., 2 .,	1			38/-	11
Collapsible tub	es. No. 1 siz	ze. 2/9.	No.	2 size.	
No. 1 size, bott					
,, 2 ,, ,,	21			5/6	
1 lb. tins, rou				6/6	.,
1 lb. ,, squ				10/6	,,
5 lb. ,,				34/-	,,
10 lb. ,,				5/8	per tin
25 1h				13 6	pot tim
50 1h		***			,,
50 Ib. ,, ,	•••	***			, ,

### WHITE.

		** ~ ~ ~	-		
Twopenny	Tins (3 d	lozen in b	(xoc	 13/6	per gross
Collapsible	tubes, N	o. 1 size		 3/6	per doz.
,,	91	,, 2 ,,		 5/6	* *
Blue Seal,	in bottle,	carton		 3/9	11
No. 1, 3 oz	. size, in	cartons		 6/→	11
,, 2, 6	11	* *		 10/-	9.9
$\frac{1}{2}$ lb. tins,	round			 10/-	1.1
1 lb. ,,	square	* *		 17/ -	> 2
		1.9		 63	* *
10 lb. ,,	> 9	1.1		10/-	per tin
	1.1	* 1		 24/-	2.7
50 lb. ,,	,,	91		 46/-	* *
	, ,	, .			

### RED or VETERINARY.

$\frac{1}{2}$ lb. tins,	round		 5/-	per doz.
1 lb. ,,		 	 $7_I$	, ,
5 lb. ,,		 		
10 lb. ,,	1.1	 	4 -	per tin
25 lb. ,,	1.1	 	 8 –	7 7
50 lb. ,,	11	 	 14/-	1.5

### CARBOLATED - VETERINARY.

1	lb.	tins					<b>7</b> /- per doz	z.
		"					<b>2/3</b> per tin	
10	lb.	9.9	• • •	• • •	• • •	• • •	<b>4</b> / <b>6</b> ,,	

### COLD CREAM.

Two	ope	enny	tins (3 do. er	n box)		16/-	per gross
Tub	es	, No.	1 size			5/-	per doz.
*	,	11	2 ,,			8/6	,,,
No.	1	size,	opal pot	aluminium	lid	3/6	, ,
2.3	2		***	, ,	,,	5/3	*1
2.1	3	1.1	***	* *	, ,	8/6	1.1
2.1	4	,,	Artist's size	11	1 1	17/-	1 1
2.1	5	11	***	,,		8/6	١.
> 7	6	**		> >	13	17/-	,,,

### CAMPHOR ICE.

Fancy tin box	 	 	-3/3	per doz.
Fancy tubes	 	 	3/3	

### SULPHO for DOGS.

In jars	 		 9/3 per doz.
In 5-lb. tins	 		 4/8 each.
1(-lb. tins	 	• • •	 8/- ,,

### WHITE LIQUID PETROLEUM. No. 0 size bottle ... ... ... 8/3 per doz.

,,	1	, ,	,,	• • •	• • •	• • • • • • • • • • • • • • • • • • • •		16/6	,,
11	_2_	,,	11	• • • •	• •	• • • • • • • • • • • • • • • • • • • •	• ••	. 24/9	11
В	ora	ate				6/6, 6/6,	10/-	per doz.	100

Camphorated		0/0,	10/-	,,	incli
Capsicum		6/6,	10/-	,,	es, ir nt St
Carbolated	• • •	6/6,	10/-	,,	e tub
Mentholated		6/6,	10/-	,,	lapsibl Gover
Oxide of Zinc		6/6,	10/-	,,	Colla
_					

### PERFUMED WHITE.

Collapsible Tubes			4/6	
Blue Seal (boxes of 1 dozen)			5/6	
No. 1 (bottle in carton)			8/6	per doz.
,, 2 size, handsome bottle	in car	ton,		•
with glass stoppers			13/-	,,

### HAIR TONIC.

- 11	-	,,	•••	 	•••	•••	10/	-,,
	2						18/-	-
No.	1	size		 			9/-	per doz.

### POMADE.

₩ No. 1 size, in boxes of 1 gross	 21/- per gross
H , 1 ,, 3 dozen 1 ,, 1 ,,	 21/6 ,,
료 ,, 2 ,, 1 ,,	 66/- ,,
Collapsible Tubes	
No. 1 size, bottle, in cardboard case	 4/- ,,
,, 2 ,, ,, ,, ,,	 8/- ,,
White and Quinine Pomade	 8/6 ,,

### PERFUMED OIL.

O1	ie si	ize, in	bottles	(tor	the I	dair)	• • •	7/-	- per d	loz.
----	-------	---------	---------	------	-------	-------	-------	-----	---------	------

### "VASELINE" SOAPS.

### UNSCENTED.

3d. tablets, boxes of  $\frac{1}{2}$  doz. tablets, 30/- per gross tablets.

### PERFUMED.

3d. tablets, boxes of  $\frac{1}{2}$  doz. tablets, 30, per gross tablets. SUPERFINE.

Delicately perfumed, box of 3 tablets, 5/6 per doz. tablets. TAR.

### 3d. tablets, boxes of 6 tablets ... 30/- per gross tablets.

CHESEBROUGH MANFG. CO. (Consolidated), NEW YORK. 42 HOLBORN VIADUCT, LONDON.

COMPLETE PRICE LIST SENT ON APPLICATION.

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CHAPOTEAUT'S CAPSULES of

# PHOSPHOGLYCERATE of LIME.

THE BEST TONIC FOR FORTIFYING AND BUILDING UP THE NERVOUS SYSTEM.

Sold by all Chemists, Wholesale: 8, Rue Vivienne, PARIS

### MORRHUOL CHAPOTEAUT



### CAPSULES

MORRHUOL DE CHAPOTEAUT is extracted from cod-liver oil, and contains all its efficacious properties without the disagreeable taste.

It cures Coughs, Bronchitis and Catarrh, restores the appetite, and gives force to feeble persons.

SOLD BY ALL DRUGGISTS.

# CHANDRON'S DROPS (Gouttes des Colonies)

A harmless antiseptic preventative against CHOLERA-FERMENTATION - INDIGESTION Cother intestinal disturbances.

SOLD BY ALL CHEMISTS



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HEPPELL & CO., 164, Piccadilly, W.

# "ERASMIC" Window Display

A SURE SOURCE OF PROFIT!

# Special Offer of free toilet soap

### A. PARCEL.

1 gross "ELITE" boxed

4 gross 1d. "Peerless" Selling Value - 48-

will be sent free with the following order:

	£	$S_{\perp}$	d.
3 gross "PEERLESS" or "ELITE"			
boxed, @ 40/-	6	0	0
3 gross "PEERLESS" or "ELITE"			
loose, @ 38/6	5	15	6
3 doz. SHAVING STICKS " 6/6	0	19	6
	12	15	0
Less 5 %	0	12	9
Net £	12	2	3

### B. PARCEL.

½ gross "ELITE" boxed

2 gross 1d. "Peerless" Selling Value - 24-

will be sent free with the following order:

2 gross "PEERLESS" or "ELITE" boxed, at 40/- 4 0 0
1 gross "PEERLESS" or "ELITE" loose, @ 38/6 1 18 6
2 doz. SHAVING STICKS ,, 7/- 0 14 0
Less 5 % 0 6 8
Net ... £6 5 10

An adequate quantity of Showcards, Window Bills, and Price Tickets, to enable you to make a GOOD SELLING DISPLAY, supplied with each order.

PRICE LIST ON APPLICATION.

ERASMIC,

Perfumers,

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DIRECT IMPORTERS OF

GUM ARABIC KORDOFAN SORTS

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ESSENTIAL OILS

(VARIOUS)

INQUIRIES FOR WHICH WILL RECEIVE OUR PROMPT ATTENTION.

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BLUE BAND BRAND
SICILIAN ESSENTIAL OILS

of LEMON, B.P.; ORANGE, Sweet and Bitter; BERGAMOT, 38 40 %.

Also TERPENELESS OILS

Guaranteed absolutely pure and genuine.
Packed in any sized Coppers.

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FINEST FRENCH CARMINE

Guaranteed Pure.

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> Finest Valencia Saffron, Guaranteed B.P. 1898.

> > And all grades for Export.

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ANHYDROUS AND HYDROUS

OF SUPERIOR QUALITY.

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Orris Root and Powder Concrete Orris Liquid Orris Resinoid Orris Packed in 1 and 3 cwt kegs, also in lever-lid tins.

PRICES & SAMPLES ON APPLICATION.

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Synthetic and Artificial Perfumes.

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Tel. No.: AVENUE 2743.

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(Successors)

GENEVA, Switzerland.

WORLD - RENOWNED PERFUMERS are now using our leading Specialties in

### Synthetic & Aromatic Chemicals

We cannot improve You can blend our ingredients and produce exquisite Perfumes.

Up-to-date Novelties for modern floral odours are

Lilafleur . . . The most dengmunation.

Lilac odours ever produced.

Cyclosia . . As indispensable as Jonoue in modern perfume laboratories.

The most delightful and refreshing

Rose Provencale

Yields the typical odour of the natural Rose Oils as produced in the South of France.

Samples and Price Lists sent on application.

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**EVANS SONS LESCHER & WEBB** 

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EXTRACTS. RESINS. TINCTURES IN BOND. ESSENTIAL OILS.

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MANUFACTURING CHEMISTS, HITCHIN, nr. LONDON.

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" Columbia " Natural "Diamond White" Re-distilled.

Finest qualities for Druggists, Distillers and Confectioners.

Sole Consignees in United Kingdom-R. W. GREEFF & CO. Thames House,

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(First introduced by the late JOSEPH O'KELL).

Registered Trade Mark, "DOUGLAS PIER."

The most popular and best-selling perfume in the market. Retail Prices ... 1/-, 1/9, 3/6, 6/-, 7/6, 10/6, per Bottle.

ALSO 3d. SAMPLE BOTTLES.

Shippers and Wholesale Buyers supplied on the best terms by THOMAS WEST & SON, 1187 Chester Road, MANCHESTER.



# Eucryl in your Window Proves You To Be a Chemist of Discernment— 100% Profit and the Right Article

The discriminating public like to see their favourite Dentifrice well shown. It proves to them that the Chemist knows his business. For the sake of your customers and those new ones you wish to attract, display

# FUCRY ON THE P.A.T.A.

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### **BRITISH ALL THROUGH**

Study the attached profit scheme, and then send your order.

### EUCRYL LIMITED

61-63 LANT STREET, SOUTHWARK, S.E.

### ORDER COUPON

To EUCRYL LIMITED. 61-63 LANT STREET. SOUTHWARK, S.E.

Please send 6 dozen 6d. tins Eucryl Tooth Powder, at 3/6 dozen net, carriage paid, together with 2 dozen 6d, tins extra and free of charge as bonus, for which I enclose remittance value 21/-

C. & D., Jan. 29, 1916.

### Home-made Ginger Wine

prepared with

has the delicious flavour of

### GOOD JAMAICA GINGER.

Requires Sugar and Water only

Minimum retail 7½d. per bottle; 5/9 per dozen, direct or through your wholesale house. 4 dozen 2½%; 12 dozen 5 %, carriage paid.

SHOWCARDS AND WINDOW BILLS.

Toboggan Ginger is used by a good class of people, who buy it again and again.

SLEGGS & CO., Robson St., Liverpool.

### The "MILNER" STRAW HAT CLEAN

Sells well everywhere.



It is easily used and gives complete satisfaction.

3 doz. 4/- net.

7/- ,, 6 ,, 12 ,, 13/- "

With Hat, or 6 Packets instead.

Carriage Paid.

5 gross, 5 °o 10 gross, 7½ % 13 to dozen for cash with order.

### RAILO

For NITS and LICE.

Per Packet, 2d. and 6d.

ORIGINAL DRY VERMIN DESTROYER. Wonderfully effective.

Non-poisonous.

Cannot be seen on the hair. Specially suitable for Export; cannot break, melt, or

lose its strength.

3 doz. 4/-, 6 doz. 7/-, 12 doz. 13/- net. 6d. size 4/- per doz.
Discount as "Milner" Cleaner. ATTRACTIVE ADVERTISING MATTER



includes a Model Kennel, or 6 Packets instead. Carr. paid. 13 to dozen for cash with order.

Reg. Trade Mark.

"Smethwick, August 1915.

"Please send by return 6 dozen RAILOX. Have had two splendid reports from France of its excellence as an insecticide.'

"Railox" and "Milner" Cleaner may be assorted for Discount.

CHEMICAL MILNER'S LIVERPOOL.

# MS, &c.

In Bulk

Carbolic Tooth Powder.

In 1d., 3d., 4\flace d. \&\ 6d. Boxes.



Wholesale and Export.

### TOILET PREPARATIONS DRUG PACKERS.

Vaselines, Zinc and Boracic Ointments, Cold Cream, Camphor Ice, &c., in 1d., 2d., 3d. and 6d. sizes.

Powders, Fuller's Earth, Violet, Complexion, Wax, Oc.

## RS (IN. LEVER, M.P.S.,

56 and 58 Chapel Street, SALFORD, @ 4 Victoria Bridge, MANCHESTER.

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(Registered)

Is the Skin Tonic for 1916.

It is effective. It is attractive.

It is price-protected. It is well-advertised. It sells readily. It bears a good profit.

THIS IS WHAT THE "C. & D." SAYS OF IT:

BEETHAM'S NEW SHOWCARD.—One of the prettiert lithographic productions which have come to us lately is the Larola beauty here depicted. The card measures 24 in. by 18 in., and is all roses, even the word 'Larola' being formed from prickly rose-stems. The fair rose-gatherer has rosy cheeks, and she and the setting make so bright a picture that ne pharmacy will be complete without it. Copies can be obtained from Messrs M. Beetham & Son, Cheltenham, the originators of Glycerine-and-Cucumber and Larola.

This handsome Showcard, in 14 colours (size 24 by 17) can be had by any chemist who will give it a good place in his pharmacy.

SON, Cheltenham, BEETHAM &

### ¶ Petroleum Jelly.

B.P. 1915, and technical qualities. White, Yellow, Orange, Lemon, &c.

### ¶ Liquid Paraffin.

Par. Liq. B.P. 1914. Odourless, Tasteless, Colourless. Spec. Grav. '860-'890.

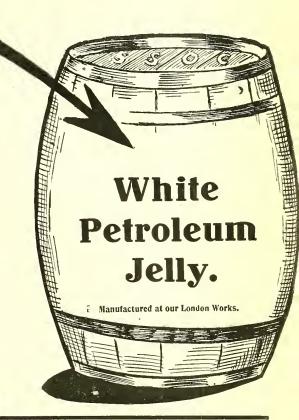
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Half-White and Coloured Oils (Yellow, Green, Red, &c. for Brilliantines)

### STERN SONNEBORN OIL CO., Ltd.

51 Royal London House, Finsbury Square, London, E.C.

Works: Burdett Oil Works, Limehouse, LONDON, E.



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Best Quality Only.

# RANDALL & SON,

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# PETROLEUM JELLY

We are importers of finest American Jelly, Red, Yellow and White. Guaranteed B.P. Inquiries esteemed also for

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(THE GENUINE.)

For Shaving without Soap, Water, or Brush.



BRIBBED AT STATIONERS' HALL.)!

### A. S. LLOYD'S EUXESIS

FOR SHAVING

WITHOUT THE Use of SOAP or Water.

DIBECTIONS FOR USB.

Unscrew the cap at the top, and gently press the headend, always taking cree to do so from the bottom, by which the the is rendered perfectly air-tight: when enough is obtained apply it to the beard either with a small soft brush or the finger, rubbing it a little; then apply the razor, and although but little of the Eulesia be seen on the face, the beard will be removed with the greatestease and comfort. It will be found very beneficial to wash before shaving. It is not intended to make a lather like soap. When the tube is not muse, besure to screw on the cap again. Sold in Collapsible Tuber, at 1s 6d. and 3s. Sold in Collapsible Tubes, at 1s 6d. and 3s. By the Original & Sole Manufacturer & Proprietor

91 TO 95, CITY RD. FINSBURY, E.C. ST. OXFORD ST. W. ENGLAND, LONDON, house Street. Late 27, Glass-PRICE, 1s. 6d.

### Sold by all Perfumers and Chemists throughout the World.

R. HOVENDEN & SONS having purchased, under an administration suit, the Business of the late A. S. LLOYD, with the Receipt, Trade-mark, and Goodwill of the celebrated Euxesis, the Trade are cautioned that the original and genuine Euxesis is now manufactured at our Factory ONLY, and may be obtained at either of our Warehouses at the following prices:

10/- per dozen, 9/6 by the 3 dozen, 9/- by the 6 dozen. Retails at 1/6 the Tube; 3/- size toporder.

NOTICE.—THE GENUINE A. S. LLOYD'S EUXESIS bears a label printed in BLACK only on a Yellow ground, with our Trade Mark at the bottom, as Illustration.

Proprietors: R. HOVENDEN & SONS, LTD., LONDON: 29-33 Berners Street, W.; and 89-95 City Road, E.O. "It's ALL in the edge."

## Safety Razor Blades Resharpened.

SINGLE EDGE,

DOUBLE EDGE, 8d.

per dozen.

per dozen.

SPECIAL PRICE FOR QUANTITIES. WRITE FOR LEAFLET.

If you are not interesting yourself in this business you are missing an opportunity to make profit.

Window Cards and Leaflets Free.

### WILLIAM P. KELLAND,

36 Camomile Street, LONDON, E.C.,

GLASGOW, BELFAST, LIVERPOOL & LEEDS.

OVER 100% PROFIT ENSURED & PROTECTED (P.A.T.A.)

for sellers of

One solution, nine shades.

A first-class article with an excellent demand, created entirely on its own merits, and carrying a first-class profit.

Size.	Min	imum ret	ail.	Minimum wholesale.				
1/-	•••	1/-	•••	7/6	, ,			
1/6		1/6		9/-	per doz.			
2/6	•••	2/3	•••	15/- 21/-	disconni			
3/6	•••	3/3	•••	21/-				

### SPECIAL BONUS.

Buyers of 3 doz. bottles receive 3 bottles gratis (may be assorted and any size).

do. 8 bottles gratis. Do. 6 doz. do. 18 bottles gratis. Equivalent in the case of the size in most general demand, viz. 1/6 size to 4/6,12/- and 27/- respectively.

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# A. S. LLOYD'S EUXESIS

For Shaving without Soap, Water, or Brush.

### CAUTION to the TRADE

Labels on the genuine EUXESIS not only bear signature of A. S. Lloyd in Black Ink, but also

- "Prepared only by his Widow and signature of
- 'Aimee Lloyd'" in RED.



Sole Manufacturers and Proprietors:

# AIMÉE LLOYD & Co.,

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HAYMARKET, LONDON, S.W.

N.B.-When ordering from Wholesale Houses write LLOYD'S EUXESIS (WIDOW'S).



## POWDER PUFFS



To secure all the available business, the puffs must be dainty and the prices must be right.

WE HAVE MORE THAN ONE HUNDRED VARIETIES AT PRICES COMMENSURATE WITH VALUE.

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MAKERS OF POWDER PUFFS AND PERFUMERY,

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BLACK BULL WORKS, LONDON, N.

### The Best Paying 1d. Line is

FOR CHAPPED HANDS.

			SALE					s.	d.
1 gross	"Softo"	with	4 doz.	bonus	-	-		6	0
½ gross	))	,,	1½ doz	,,,		-		3	0
3 doz.	11	,,	1 doz.	٠,	-	-	-	1	9
A Chemist writes: "Please send our goods immediately, as the 1 doz. 'Softo' was cleared in a day.'									

The SOFTO Manufacturing Co.

33 Edgware Road, Park Lane, W.

### RADIUM COMPOUNDS, &C.

### CLEW'S RADIUM LUMINOUS PAINT.

(ORIGINATED 1904.) For Clocks, Watches, Compasses, from 5/- per grain.

Mesothorium Lumiuous Paint, from 2/8 per grain.

(Not less than 10 grains supplied.)

PURE SALTS OF RADIUM & MESOTHORIUM. Ionium, Actinium, Radio-Lead

RADIO-ACTIVE SOIL FERTILISERS

of guaranteed strength.

CLEW'S PATENT SCINTILLOSCOPES,

Applicators prepared. Radium Salts Bought, Sold, Exchanged, and Certificated against International Standards.

M.P.S., Radiographer, F. HARRISON GLEW, 156 Clapham Road, LONDON, S.W.



FIRST on the market and still FIRST in favour. A class product highly valued by ladies everywhere. Sells freely at a substantial profit.

Order direct or of your Wholesaler. Specify "Dr. Evan Williams," and sell the genuine article. Descriptive Price List free.

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### EVERY DENUINE PACKAGE



### EWEN'S LARD

is the ONLY LARD that

is made exclusively for pharmaceutical. and Perfumery preparations

and is the BEST AND MOST RELIABLE

Guaranteed B.P. Lard on the Market.

### MAGNUS, MABEE & REYNARD, Inc.

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257 Pearl Street. Cable Address— "MAGLAUR." New York City, U.S.A.

Importers and Manufacturers.

### ESSENTIAL OILS, VANILLA BEANS, DRUGS & CHEMICALS.

We offer for sale-

Oil Peppermint, American Oil Sassafras, Natural

- .. Spearmint
- Birch (Wintergreen)
- Wintergreen Leaf
- ,, Cedarwood
- Limes, Distilled H. P.
- - Artificial
  - ,, Wormseed, Baltimore
- ,, Wormwood, American , Sandalwood, W.I.
- Balsam Tolu
  - Copaiba
  - Peru

We solicit correspondence relating to the purchase or sale of any article used in the Drug, Perfumery or Soap Trades,

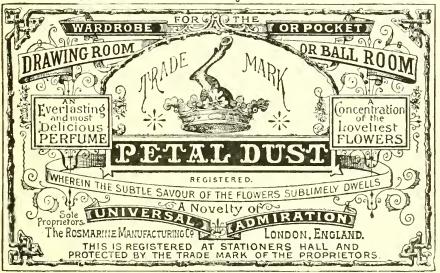
A powerful antiseptic and deodorant.

# PETAL DUST REGD.

The Great Floral Air Purifier, and the sweetest & most lasting of all Natural Flower Perfumes

As supplied to the HOSPITALS and HOSPITAL SHIPS, and the SERBIAN RED CROSS SALONIQUE.

USED BY HER MAJESTY QUEEN ALEXANDRA.



Commands the largest sale of any Dried Perfume in the World.

UNIQUE IN ITS COMBINATION, IT IS THE FAVOURITE OF ALL CLASSES.

Once shown, creates its own Demand.

Retails in packets, 3d. and 6d. each, and in miniature Sample Packets at a penny each.

A supply of attractive Advertising Matter will be sent on request.

For orders of 5 gross and upwards of the 3d. size, customer's name and address can be printed at foot of packets.

SOLE PROPRIETORS-

THE ROSMARINE MANUFACTURING COY., LONDON, S.E.

## IMPORTANT NOTICE.

EDWARDS' HARLENE CO. beg to give notice that in spite of the great difficulties raised by War conditions they are still able to complete at the shortest notice all trade orders for:—

"HARLENE" for the Hair (Harlene Hair Drill)

"ASTOL" for Grey Hair

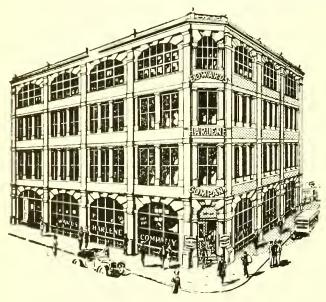
"CREMEX" SHAMPOO POWDERS

"ASTINE" VANISHING CREAM (for the complexion)

"UZON" BRILLIANTINE

"ASTINOL" Aromatic Fluid Extract (Pine Baths at Home)

and all other of their well-known preparations.



As heretofore, an extremely generous and bold advertising campaign has been carefully thought out, and distributing wholesale houses and retail chemists would be well advised to keep stocks fully replenished.

### SPECIAL NOTICE

"Harlene" is now put up in solidified form for the convenience of travellers, and as there is a large demand, Chemists should see that they have it in stock.

One size only in Tins, 2/9.

MINIMUM WHOLESALE PRICE 33/2 per dozen. Discount 20%.

All correspondence should be addressed to

### EDWARDS' HARLENE CO.

20-26 Lambs' Conduit Street, London, W.C.

# Petroleum Jelly

White, Yellow, Amber, @ Ruby Red, for all Pharmaceutical Veterinary purposes.



MEADE-KING, ROBINSON @ CO. LIVERPOOL **MANCHESTER** 

### ROYAL COURT HAIR DYES.

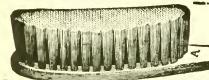
Notwithstanding the immense increase in cost of production, we are still selling at old prices and allowing 100%, profit. Our old customers report increased sales, and the hundreds of new customers are finding a truly BRITISH preparation is better, more reliable, and more profitable than Continental makes. In selling this preparation every new customer is obviously a regular one.

1 3 size 7 6 doz.; 2 - size 12 - doz.; 3 6 size 21 - doz. Name on 3 dozen.

### J. KNOX WALKER & CO., LTD.,

422 KINGSLAND ROAD, LONDON, N.E.

SAMUEL VAUGHAN, Managing Director.



Bidwell Bidwell & Co

# BIDWELLS' TOOTH BRUSHES.

NO LOOSE HAIRS,

Please send for Catalogue-

BIDWELL, BIDWELL & CO., Ltd., AXMINSTER, DEVON.
LONDON OFFICE: BUSH LANE HOUSE, CANNON STREET, E.C.



Apply for Prices to largest makers in U.K.

PRESTON'S LIVERPOOL DISTILLERY CO. LO.

Bankhall Distillery, Sandhills, Liverpool.

Office: 4 INDIA BUILDINGS, LIVERPOOL. 400

Largest

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in the

World.

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Our Stocks

and

Selections

are Unrivalled

in Value

and Extent.

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Telegraphic Address.
CRESSWELL, WESTCENT, LONDON."

Telephone: No. 1432 HOLBORN.

INTERNATIONAL SPONGE IMPORTERS, LIMIT

Sponge Importers, Exporters and Merchants, and Chamois Leather Dressers, 9 RED LION SQUARE, New Warehouses and Steam Bleacheries, LG LONDON, W.C. 18 & 19 RED LION SQUARE,



 $m{V}$ iew of  $m{M}$ editerranean Case Goods Department (Floor Space 3.000 sq. ft.) where Chemists' and Druggists' Sponges are

Buyers are invited to call to Inspect our Magnificent Stocks and make their own Selections. Lowest Market Prices. Absolutely Best Values. The following abridged List will serve as a guide to Buyers when writing.

### UNBLEACHED SPONGES Original Cases.



HONEYCOMB. Extra Choice The Pick of all the Fisheries. FINESTTEXTURE and SHAPE.

Average in lase Price per Piece. 300 Toilet at 9d. 25) 200 1/-1/6 1 1 160 2.6 120 90MediumBath4/6 72 45 Large Bath 8/6 HONEYCOMB. Toilet & Bath Good 2nd

Quality. Pieces Price per Piece. **4d**. in Jase **300** a.t 270 180 170 6d. 9d. 110 90 80 65 60 5/6 6/6

FINE TURKEY CUPS | FINE 1st Quality

PICKED SHAPES, Average Pieces Price in per Case. Piece Toilet Selected 300 at 1/

200 at 1/-200 ,, 1/6 150 ,, 2/-140 ., 2/6 100 ., 3/-3/6 90 Teilet 4/6 5 -70 Bath 50 6/-Selected | 40 7/3

TURKEY SOLIDS.

SELECTED SHAPES,

1st Quality

Average Pieces Price in per Case. Piece Nursery 200 at 6d. ,, 200 ,, 8d. .. 209 ,, 1/-150 100 ., 19 100 ., 2/-

50

24

IMPORTANT NOTICE.

THE CONTENTS OF THE ABOVE CASES WILL BE PRESS-PACKED AND SENT POST FREE 'TO COLONIAL AND FOREIGN BUYERS WITHIN THE RADIUS OF PARCELS POST.

Sponges in Small Packages. Fine Turkey. Fine Egyptian and Honeycomb. In 1st, 2nd and 3rd Qualities. Bleached or Unbleached 6state which in ordering). On Strings of 1 dozen pieces or loose in bags. At per dozen: 2s., 3s., 4s., 6s., 9s., 12s., 15s., 18s., 24s., 30s., 36s., 42s., 48s., 54s., 66s., 72s. Bleached Cuban. At per String or Dozen. Wool, Grass, Yellow and Fine. 1s., 2s., 3s., 4s., 6s., 9s., 12s., 15s., 18s., 24s.

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Registered Telegraphic Address: "TRICHO PHONE LONDON."

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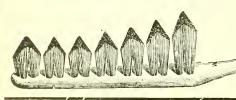
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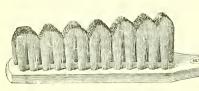
### The Most Efficient



MADE

is JOHN WESSLER'S MODEL.

### SCHOOL STANDARD TOOTH



Regd. No. 308259.

The School Standard Tooth Brush

IN TWO SIZES.

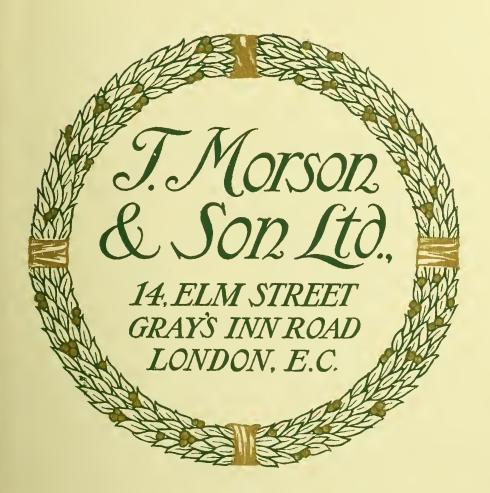
23/- and 27/- per gross.

With place for writing child's name on each brush. Approved by the School Dentists' Society.

As the oldest and largest manufacturers of Best British Brushes in the world, we can give you better value than foreign makers.

Try our QUALITY and see.

# BEST BRITISH BRUSHES



Supplement to THE CHEMIST AND DRUGGIST, January 29, 1916.



THOMAS MORSON & SON Ltd. 14 Elm Street, Gray's Inn Road, London, W.C. and Summerfield Works, Ponders End, N.



Mr. Thomas N. R. Morson, Founder of the Business.

# SHORT ACCOUNT OF THE HISTORIC HOUSE OF MORSON, MANUFACTURERS OF FINE CHEMICALS, etc.

TE renaissance of chemistry may be considered to have taken place with the dawn of the nisteenth century. The fruitless search for the philosopher's stone and the elixir of life ha discredited alchemy, but Lavoisier's newer conception at once lifted chemistry among th sciences. The early years of the century found Davy, Dalton, Gay-Lussac, Berthollet an Berzelius hard at work in their respective countries erecting the system of chemical thery which in its main features still remains. Faraday isolated benzol in 1825, upon which thewhole industry of aniline dyes has since been built, although it was not till more than thily years afterwards that Perkin discovered the first aniline dye. The discovery of alkaloids in getable products in the early years of the century had formed one of the most brilliant chiters in the chemistry with which the imaginative French nation has enriched the world. Valuelin, Derosne, Pelletier and Caventou found alkaloids in all the familiar drugs of the pend, and really supplied a scientific basis for the whole practice of medicine. In view of the cry remarkable advance in chemistry at this period, it is permissible to recall that iodine wasfirst isolated by Courtois in 1811, bromine by Balard in 1826, that iodoform was first prepred in 1828 by Serullas, whilst among the discoveries of Pelletier and Caventou were the of emetine in 1817 and strychnine in 1818. These last-named chemists also separated quine from the mixture of cinchona alkaloids which the Portuguese chemist, Gomez, pre red in 1811. Sir Humphry Davy and Michael Faraday at the Royal Institution, London, weralso at this time astonishing the world by the fertility of their chemical and physical invetion.

was at this period that the business of T. Morson & Son was founded partly to create and artly to meet the demand which had arisen for fine chemicals for use in medicine and the ts.

ost is father whilst still a child he was sent to a school at Stoke Newington, where he emped until he was considered old enough to be placed out to learn a business.

fourteen he was apprenticed to Mr. Charles Dunn, a retired Army surgeon, who kept rell shop in Fleet Market which occupied the centre of the thoroughfare now known as arrigdon Street, and was swept away in the process of street improvements. Mr. Dunn year after, and the business, stock-in-trade, goodwill and apprentice were transferred Henry Morley, a well-known apothecary in his day. Young Morson had, however, no aste or practical surgery, but a decided inclination for chemistry, which led him to begen sion to attend classes in chemical science. He took a course of chemical lectures at Hospital which were conducted by Dr. Mariet, Dr. Babington and Mr. William Allen, and beguently attended those of Mr. Brande at the Royal Institution. In the year 1818 of omcies were loosened by the death of his mother, and young Morson, who had doubtless are red by hearing of the brilliant work of French chemists, went over to Paris. He entered the parmacy of Mons. L. A. Planche, of the Rue du Mont-Blanc, and remained with him for





two years or so. M. Planche was one of the editors of the "Journal de Pharmacie," oldest pharmacy journal in the world, and he is described as an able man and a good che It was fortunate that Mr. Morson should become associated with this French chemist, there is no doubt that he made the most of his opportunities for enlarging his knowled the newer chemistry. It will be noticed that the period of Mr. Morson's residence in synchronised with some of the more important alkaloidal discoveries of Pelletier and Caver and one can imagine with what enthusiasm he followed the details as they were published the "Journal de Pharmacie." It is not surprising to find that when he returned to Lor in 1821 to take over the retail business of his apprentice-master in Fleet Market he begamanufacture the newly discovered alkaloids and fine chemicals. He was, in fact, the to make sulphate of quinine and morphine on a commercial scale in England, and this in the old pharmacy at 65 Fleet Market.

A price list he issued in 1822 is still extant, and it is worth quoting, bearing in the novelty, at the time, of the fine chemicals referred to and the relative money value and now of the alkaloids.

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a 11.511 0 - tille a	·/··	•									
List of New Ch	emical Pr	eparati	ons emp	loyed	as Med	licines :	:				
Sulph. quinine								 			40s. per o
Morphia								 			18s. per o
Acetate of mor	phia							 			18s. per d
Sulphate of me	orphia							 			18s. per 6
lodine								 			7s. per o
Hydriodate of	potass							 			9s. per o
Strychnine								 			25s. per d
Emetine								 			10s. per c
Brucine								 			30s. per d
Veratrine								 			30s. per d
Gentianine								 			20s. per d
Lupuline								 			
Tr. of lupuline								 			
Tr. of croton t	iglium							 			
Oil of croton t	iglium							 			
Alcoholic ext.	of nux vo	omica						 			
Ext. of opium	, deprived	l of nai	rcotine					 			
65 Flee	t Market,	1822.							-	Г. М	ORSON.

The rapid growth of the business led to the removal in 1825 to more converpremises in Southampton Row, where, following the publication of Reichenbach's experim on wood-tar, the manufacture of kreosote was worked out. Kreosote works were established at Hornsey Rise, and kreosote first made on a large scale in this country. Two ks were subsequently removed to Homerton, and finally to the present premises at Por End, Middlesex.

As may be expected, Mr. Morson took an active interest in theoretical chemistry chemical progress. It was the Royal Society of Arts and the Royal Institution whith that time supplied the meeting ground for chemists. The Chemical Society, although oldest Chemical Society, was only founded in 1841, and was an outgrowth of the Society of Arts. The Pharmaceutical Society was established in the same year, two many contents of the same year, the same year year.

fter the Chemical Society, and of both societies Mr. Morson was a founder. At the historic neeting held at the Crown and Anchor Tavern on April 15, 1841, at which it was resolved form the Pharmaceutical Society, Mr. Morson moved the resolution requesting the Comittee to frame by-laws and regulations for governing the Society. Mr. Morson contributed paper on the "Rise and Progress of Chemistry" at a meeting of the Society in June 1841, and afterwards many other papers on scientific subjects. He became Vice-president in 1844, and in 1848 served his first term as President. Altogether he was connected with the Council retwenty-eight years, retiring in 1870 at the age of 70. He died in 1874.

His son, Mr. Thomas Morson, born in 1825 at his father's house in 19 Southampton bw, had for many years before his father's death assisted him in the conduct of the rapidly veloping business of the manufacture of fine chemicals. After some years at a school at Iverstock Hill and at the University College School Thomas Morson was sent by his father ta school in Paris, and remembered in 1840 seeing the procession pass with the remains of the great Napoleon when they were translated from St. Helena to the Invalides. Intended the medical profession, he, like his father, developed a preference for chemistry, and, this bing recognised, he received specialised instruction at the Institute Mathé and the Pharmacie Fal before returning to England. Mr. T. N. R. Morson took a house at Queen's Square and ge up the residential part of the premises in Southampton Row to his son. Mr. Thomas Arson married a French lady, the daughter of a pharmacist, in 1851, and his two sons, MyThomas Pierre Morson and Mr. A. R. Morson, are at the present time the senior directors of Thomas Morson & Son, Ltd. During the period of Mr. Thomas Morson's direction, th business continued to grow, additional premises being taken in Southampton Row, the reil and wholesale parts of the business being definitely separated. There were manufauring laboratories at Southampton Row, Queen's Square, Hornsey Road, and Homerton, eal establishment being devoted to some special group of manufactures. Mr. Thomas M son died in 1908, but had some years previously given over the reins of the business to

Associated with Mr. Thomas Morson for over forty years was Mr. Robert Taubman, which was born in the Isle of Man, and first joined the firm about 1858 as an assistant in the reth pharmacy in Southampton Row. He developed unusual ability, and was soon transfelled to the wholesale and manufacturing business. Mr. Taubman was for the last fourteen year of his life a partner in the firm. His son, Frank Mowbray Taubman, who is also a phimacist, is the well-known sculptor whose bust of William Martindale in the Examination Ha of the Pharmaceutical Society is not the least successful of his many artistic works. Mr. Roort Taubman died in 1905, and it was at this time that a re-arrangement of business intests led to the retirement of Mr. Thomas Morson.

he retail pharmacy at 124 Southampton Row (originally numbered 19), where Mr.T.N.R. Moon, the founder of the business, moved to in 1826, was closed in 1900. Many interesting det is could be given of this historic pharmacy, as it was here that Faraday, Graham, Bowerban Robert Brown, Edward Forbes, and George Cruikshank the caricaturist, were frequent visits. The late Marquis of Salisbury, who was well known as a dilettante in chemistry and hysics, used to purchase here the pure chemicals he required for experimental work. Theyholesale premises on the other side of Southampton Row remained until 1904, when





the reconstruction of the street necessitated their removal to 14 Elm Street, Gray W.C. Meanwhile, the manufacturing side of the business was concentrated at the field Works, Ponders End.

### THE PRESENT DIRECTORS.

Last year the business was converted into a private company with limit The senior directors are Mr. Thomas P. Morson, Mr. A. R. Morson, the othering Mr. Thomas D. Morson, Mr. Leslie J. Morson (sons of Mr. T. P. Morson) a

Mr. THOMAS PIERRE MORSON, the Chairman and Managing D educated at University College School, Gower Street, afterwards in 1868 going to study German. In 1870 he studied at the Royal College of Chemistry in Ox and attended the lectures of Professor Franklin. After that he served his apwith Messrs. Ferris & Co., of Union Street, Bristol. He passed the Minor Exa 1874, and in 1879 became partner in the firm of T. Morson & Son. Mr. T. P. always maintained strictly the traditional custom of the firm in calling personal business friends in all parts of the country.

Mr. ALBERT ROBERT MORSON, a Managing Director, is the son of Thomand was born 1855. He was educated at University College School, Londor shewed an aptitude for Sports. He subsequently served his apprenticeship wit of Bristol, and then took a two-year course of Chemistry at the Royal School of Microson. He became a partner in the firm of T. Morson & Son in 1883. Morson has always taken an active interest in yacht racing, and has been for makeen member of the Royal Thames Yacht Club.

Mr. THOMAS DAGOMET MORSON, F.C.S., Works Managing Director, son of Thomas Pierre Morson. He was born in 1880, and was educated at Hailey (1894-1897), and University College of London under Sir William Ramsay ( He matriculated from London University in 1898, and left University College Research Work under Professor H. E. Armstrong at the Central Technical Col Kensington (1899–1901). These researches were not completed when in the Spri instead of entering a German University as originally intended, Mr. T D. Mor superintend the removal of the works from Homerton and assist in the equipment and control of the firm's new factory at Ponders End, where he remained un which year he was transferred to the Head Office on the death of Mr. Robert Tar the autumn of 1904 Mr. T. D. Morson visited a number of chemical and other U.S.A. and Canada in connection with the Annual General Meeting of the Society Industry, which was held that year in New York. He was also responsible for exhibit of chemicals which gained a Gold Medal at the St. Louis Exposition in the In 1906 Mr. T. D. Morson was appointed Hon. Secretary of the Chemical Inc which is closely associated with the Society of Chemical Industry, and in the sum was appointed Hon. Secretary of the London Section of the Society. He is also the Chemical Society, and has always been keenly interested in the develop technical branch of Chemical Manufacturing.

Mr. LESLIE JULES MORSON, Managing Director, is the third son of Thomas Pierre Morson. He was born in 1883, and was educated at Haileybury College (1897–1901). In leaving College he studied at the "Square," and subsequently pursued a course of Compercial Training. In 1905 he took a position in the Firm's Laboratories at Ponders End, spejalising in the Analytical and Research Departments. In 1909 he was transferred to the Head Offices, being responsible for a large part of the Commercial and Export side of the business.

Dr. C. S. ROY, A.I.E.E., Works Managing Director and Technologist, obtained his arly training at the East London Technical College and East London College University of ondon, under Prof. J. T. Hewitt. He worked for nearly six years in various laboratories different parts of England, and for many months tramped the country as an ordinary bourer, earning just enough to live upon, but learning to know the conditions and habits the working man, and seizing every opportunity of thoroughly understanding him and orks methods. He then proceeded to Jena University, where he obtained the degree of a.D. ("Magna cum Laude"). In March 1914 Dr. Roy became associated with the most T. Morson & Son, and in a few months was appointed Works Manager. Besides a chemical qualifications, he is a fully-trained Electrical and Mechanical Engineer.



### **UMMERFIELD** WORKS.

THE offices and warehouse of T. Morson & Son, Ltd., are at 14 Elm Street, Gray's Inn Road, London, W.C., and it is from this address that the business is controlled. Te manufacturing premises fare at Ponders End, one of the Northern suburbs of Indon. The Summerfield Works, as they are called, are connected with the London oces by telephone and a fleet of motor delivery vans. Although situated by the side of the Cat Eastern Railway, it is found more convenient in practice to employ motor vans and diver direct to wholesale customers to any of the great London railway termini or to thElm Street warehouse. Motor cars are also used by the Directors for reaching either the Wrks or offices. Summerfield Works covers several acres of ground, and is situated in a ccparatively open country near Epping Forest, although other manufacturers requiring late space are rapidly acquiring the available sites in the neighbourhood. There are two er ances to the premises connected by a semicircular drive, and midway between the en ance is a large new garage arranged for the rapid handling of motor-cars during cleaning or pairing operations. It is of sufficient capacity for all the delivery vans and private cars. Nor the entrance to the Works is a large house devoted to the administrative departments. Ti main features of the Summerfield Works are two long ranges of brick buildings running pallel to each other. These are two-storey buildings, the upper storey being reached by oulde flights of steps. The buildings are divided into a number of separate laboratories or shops," each devoted to a particular manufacture. Between the two brick buildings is e boiler-house which supplies power to the whole Works. There are also in this wide spes several installations of plant for those operations which are best carried out in the open air uch, for example, as the manufacture of hydrocyanic acid and valerianates. At right angles





to the brick buildings and beyond is a series of iron frame erections which are s up all the available space. It may be of interest to note here that the productive Works has been trebled within the last three years. A rough idea of the size may be formed from consideration of the fact that there are nearly five miles of and over six miles of electric cables. Evidence of progress is everywhere she engineers and builders are constantly erecting new plant and buildings for new plant a or for duplicate installations to relieve departments which experience or excepti show to be insufficient. The Company have for this purpose their own staff who have been trained to tackle any of the unusual problems which perplex or manufacturers. It must be borne in mind that at works where some thousands are made, many continuously, the workmen in course of time acquire an instincti of the special requirements, and are able to carry out the engineering plans laid with an intelligence that can only come from practical experience. It is diffic until one has been through works such as these what various forms of power mus One chemical requires in the course of its manufacture heat at a low boiling point vessel. Another requires the heat of a forced draught, whilst the electric furnac practical form of heat for certain purposes. Electricity is made full use of at the Works both for lighting and other purposes. At various points one comes acro of pipes or cables, as it must be remembered that not only are there vacuum pi to various points and electric light cables, but water pipes. Not only is a large vol needed for cooling purposes, but in washing precipitates. The water is de well on the premises which supplies 1,500 gallons an hour, but such enormo are required in the course of manufacturing operations that outside supplies are a Large quantities of distilled water have also to be provided, as for washing bismut precipitates, and in the preparation of chemically pure products, the utmost ca that no trace of impurity is introduced at any stage. In making analytical reager or such things as physiologically pure sodium chloride, most scrupulous care must as to purity of solvents, the cleanliness of vessels and the indifference of the vessel The cost of the upkeep of enamelled evaporating pans alone is very consider is such a variety of manufactures carried on that it almost precludes the detaile of the processes. A few hours at these works teach one more applied chemistry obtained by a long acquaintance with chemical literature. It awakens the image one wants to be a chemist with the same enthusiasm as the average British boy wa a motor or steam engine.

To follow a manufacture through its various stages is an education. In the there is in one part the metal bismuth being dissolved in nitric acid and dense fun acid being evolved. Later on the copious milky precipitates are being washe of tanks, and still later the subnitrate or carbonate is pressed, dried and gro operations follow each other naturally, but it is interesting to see how the build arranged to allow this natural sequence to develop with the least interruption. It paratively simple as a manufacturing process, but the numerous pitfalls that have tagainst render it necessary to keep a check upon each stage of the operation.

stance as those we have referred to occupies quite a number of stages, whilst the whiteness I density of the finished product can be influenced by many factors.

Another typical plant is that employed for making Lister's cyanide. The mixing vessel arranged that the workman can handle large bulks of this famous antiseptic without danger, then it is stated that this double cyanide is produced at the rate of tons per week, it will realised that the amount of deadly poison involved in the manufacture is very considerable. It is shop "where iodides are made is another interesting part of the building, although but typical of the whole works. At the beginning of the process there is iodine and iron the combined, and then stage by stage the process continues until the clear concentrated atton is left to crystallise under the conditions necessary for the particular iodide that the eing made. A large store of iodine is housed in its own building, and this needs to be ablimed before it can be used in making iodides.

Another laboratory is devoted to a similar series of bromides, but the manufacture of probromic acid is not exactly melliferous, although under proper conditions it is well under proper. The electrolytic manufacture of iodoform, the production of formaldehyde and ropine, the manufacture of glycerophosphates, phosphates, hypophosphites, citrates, etes, salicylates, tartrates, hydrocyanic acid and chloroform are also of very great interest. It series of rooms is devoted to the manufacture of scale preparations. Some of the more retive scales need to be made under special conditions as regards light. The scaling loss with racks of thousands of framed sheets of plate glass have a temperature which are not one of chambers of a Turkish bath. The solutions are rapidly painted on the glass and replaced in the racks. Presently one becomes aware of a gentle cracking sound are scales begin to lift from the glass, and soon a dexterous worker arrives to scrape off necessary to be proper specific gravity of the various solutions is one of the main factors in the scaling operations, but workmen who have been engaged on this work for ten, we y, or thirty years acquire special faculties which enable them to produce the correct thing meingly.

thium, strontium, cadmium, cobalt, zinc and aluminium salts are made in a great variety pret the requirements of pharmacists and technologists. The newer siccatives required paint and varnish trades and collodion for the photographic process worker may also perferred to. There is also a special department for the manufacture of chemically pure easysts for analytical work. This latter department is being still further developed to meet mand for British chemicals of the "A.R." standard. Then, again, there is made a series of ethers and alcohols, such as amyl acetate, amyl nitrite, and butyric alcohol, seed a medicine or as flavouring agents. The preparation of medicinal sodium sulphate is not a manufacture which necessitates a large space in the Works. There are many different of Glauber's, and each has to be made to meet various demands and uses. The acid ulp te is made in abnormally large quantities, as it is needed in tons for making tablets for terriling drinking water for the troops on active service. The suffocating fumes given for the manufacture require special precautions against injury to the workmen.

Nntion must be made of the kreosote and guaiacol plant which has been a special manuacturof the house since these distillates were discovered. The beechwood tar from which





these are derived is stored in tanks of a capacity of many thousand gallons, and in depasses through the still which separates the constituents.

The galenicals department is devoted to the manufacture of resinoids and There is a large store room for crude drugs where are to be seen, for example, hu bags of mandrake rhizome. The vegetable drugs require grinding before they recolators holding a ton or so at a time. The alkaloids and resinoids made include a sicum, colchicin, emetine, ergotin, euonymin, gingerin, iridin, leptandrin and por In this department are also made thymol, chlorophyll, chrysarobin, and last, but Morson's Pepsina Porci.

Passing other departments devoted to box-making, bottle-washing and general an inspection is made of the analytical and research laboratories. These laboratories the chemical products at different stages of the manufacture. The raw materials, for have to be passed by the chemists before use in the manufacturing operations, and finished products must meet the stringent requirements of the laboratory before the passed into stock. This leads us to a consideration of the system of analytical co reference numbers which is a feature of the Morson products, and which gives guarantee to every batch of a chemical which comes up to the requirements of the anal batch can be passed into stock until a sample taken by the sampler—one of the mos employees in the works—has received a certificate that it meets the standard. It is rethat as the reputation of the house depends upon its ability to maintain quality, n of organised analytical control can be too elaborate so long as it ensures efficiency. seen that what is needed in a chemical factory is the control of the operations whi up the cost of the chemicals, and which ensure the quality being up to given st When a batch of a chemical is passed by the analysts it is given a reference number is affixed to each package sent out. The number, which can be traced at any time, the analytical data which are recorded in the laboratory. A system of card entries possible to trace the history of any delivery from the raw material to the finished The system has been in use now for some time, and has proved of great assistance: taining an adequate analytical control, and also affording an easy means of reference.

We must not omit to mention the Works library, which is separately housed. It bably one of the finest of its kind in the kingdom. The library, which is the result years of careful collation and compilation by Dr. Roy, occupies a large room, and the being contained in sectional book-cases, are protected from dust. Complete sets of most useful chemical publications are here, such as Liebig's "Annalen," the "Be "Fortschritte der Chemischen Technologie," "Chemisches Centralblatt," the Journa Chemical Society, the American Chemical Society, the Society of Chemical Industry, of the British Association, and the "Year Book of Pharmacy." In addition there are standard reference works and special treatises on chemistry and the allied sciences, nur in all over a thousand volumes. Patent literature is not neglected, specially p abstracts of every chemical patent being kept on the card system. The librarian, who secretary to Dr. C. S. Roy, the Works Managing Director, has a room adjoining, and to supply quickly all published details regarding any particular chemical question.

There remains to be written a few words regarding the staff and workmen. These have been trained through a long course of years, most of them from boyhood—many cases ing of father and son, and, in at least one case, a grandson. What most strikes a visitor is a astonishing loyalty of the workers, which can only have resulted from a long experience fair and just treatment by the employers. Since the outbreak of war, when the activity the manufacturers has been doubled and trebled, this eagerness to help has been additionly manifest. The group of the oldest employees which is given in the illustrations to this occur is a striking tribute to the treatment which the workers receive. That they appearant it is shown in many ways besides the devotion to work to which we have referred, a example is given in the letter of thanks which the Chairman, Mr. T. P. Morson, received tently on the occasion of the Fourth Supper and Entertainment held at the works in lebration of the twenty-fifth and fiftieth year of service on the part of two more members the Staff.

At the Head Offices may be seen the results of the Firm's energies in connection with ternational Exhibitions held in various parts of the world, which shows the world's apeciation of the efforts of the firm and employees.

Morson's products have gained high Awards wherever they have been exhibited, as own in the following:—

	LIST OF AWARDS.	
LONDON	(Pure Chemicals)	1851 PRIZE MEDAL
PARIS	(Pharmaceutical Preparations)	1855 PR1ZE MEDAL
LONDON	(Morphine and other Alkaloids)	1862 JUROR
PARIS	(Pepsine & Scale Preparations)	1867 SILVER MEDAL
PHILADELPHIA	(Alkaloids)	1876 PRIZE MEDAL
PARIS	(Kreosote & Iodoform)	1878 SILVER MEDAL
ST. LOUIS	(Fine Chemicals & Scale Preparations)	1904 GOLD MEDAL
LONDON	(Iodides & Bismuth)	1908 GRAND PRIX
LONDON	(Pepsine & Kreosote Preparations)	1909 JUROR
BRUSSELS	(Bismuth Salts, Kreosote, etc.)	1910 DIPLOME D'HONNEUR
TURIN	(Fine Chemicals)	1911 GRAND PRIX
TURIN	(Reagents)	1911 DIPLOME D'HONNEUR

These Awards were made for the high quality of Morson's fine chemicals for use in dicine, pharmacy, and the arts.

It is recognised that written descriptions of the Summerfield Works alone cannot convey omplete idea of the various operations carried on there. A series of photographs has, refore, been appended which it is hoped will assist the reader and prove of general interest. The Directors have considered that the change in title of such an old-established family priness warrants some permanent record of the occasion.



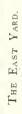
With their Best Wishes to many friends in all parts of the World, they present this SOUVENIR OF THE HOUSE OF MORSON.



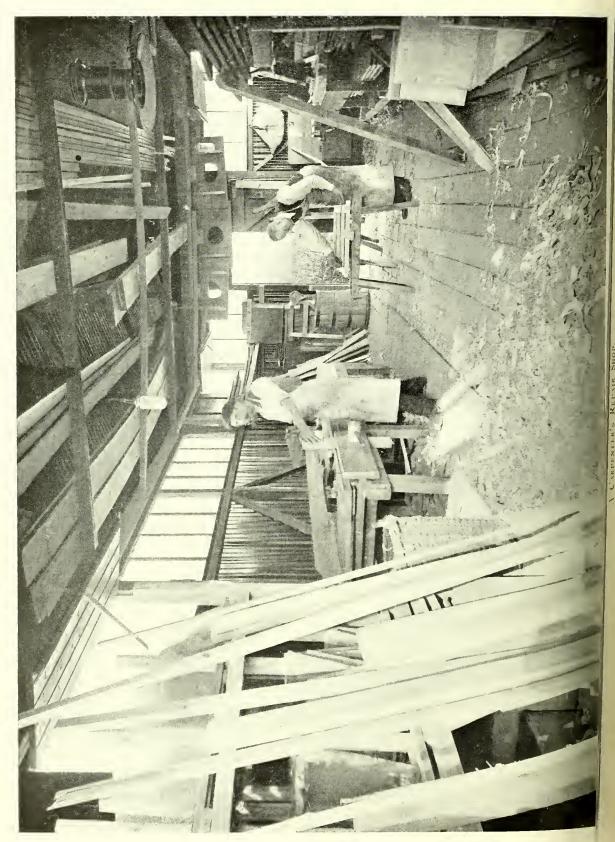


HEAD OFFICES AND WAREHOUSE, ELM STREET, GRAY'S INN ROAD, W.C.

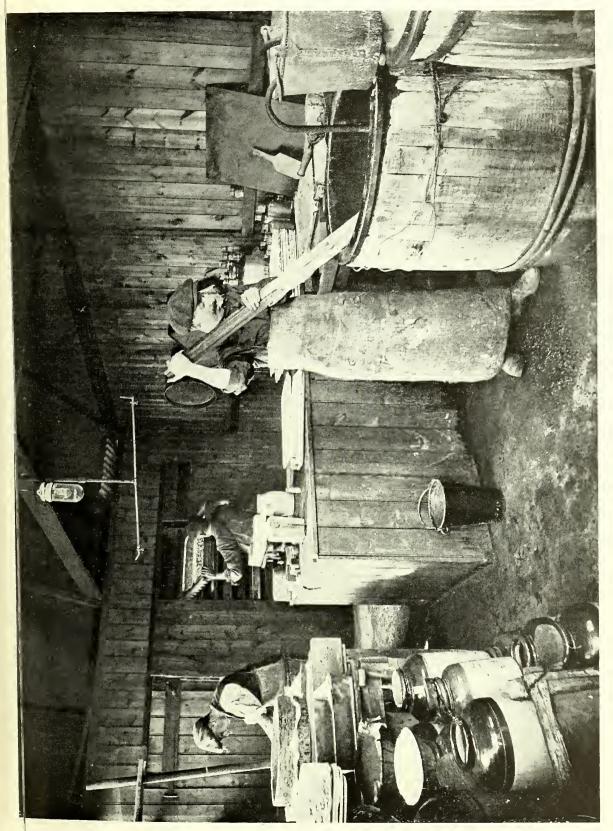
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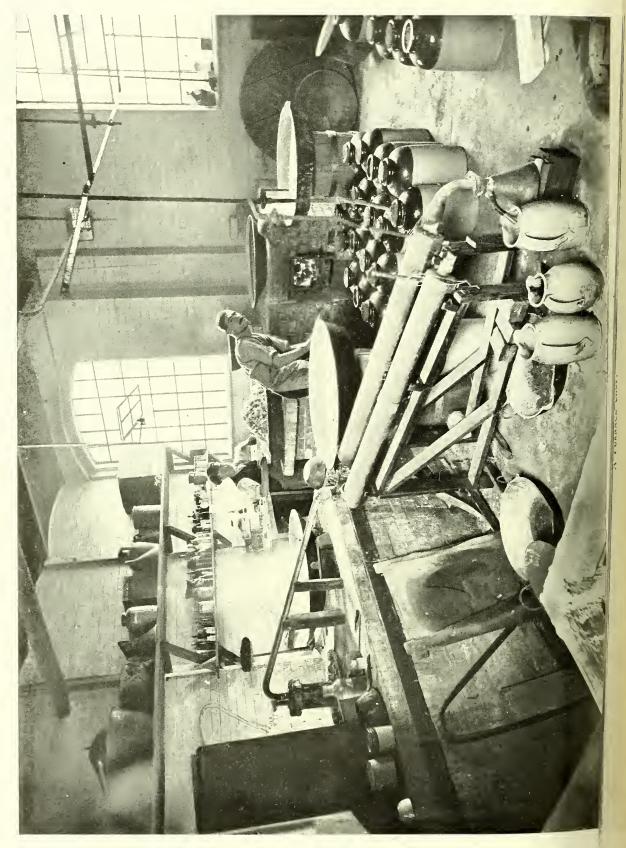




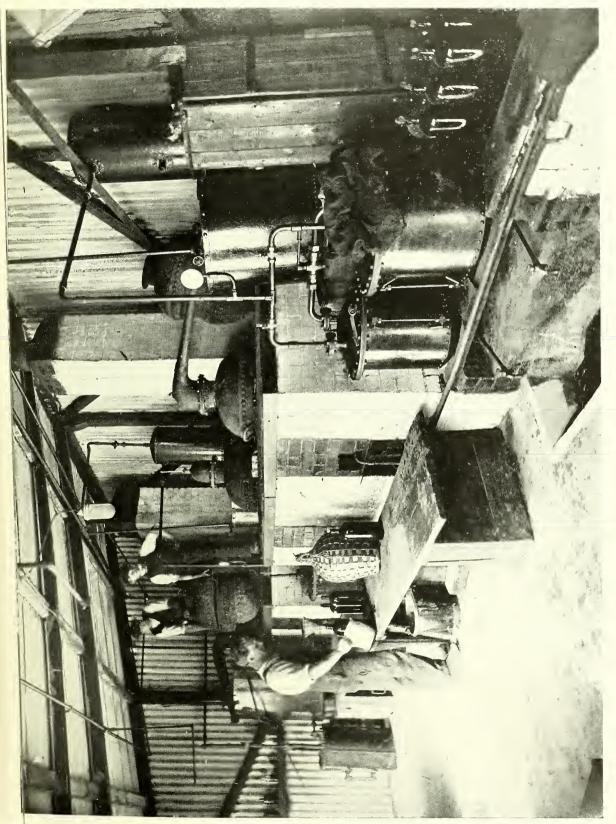


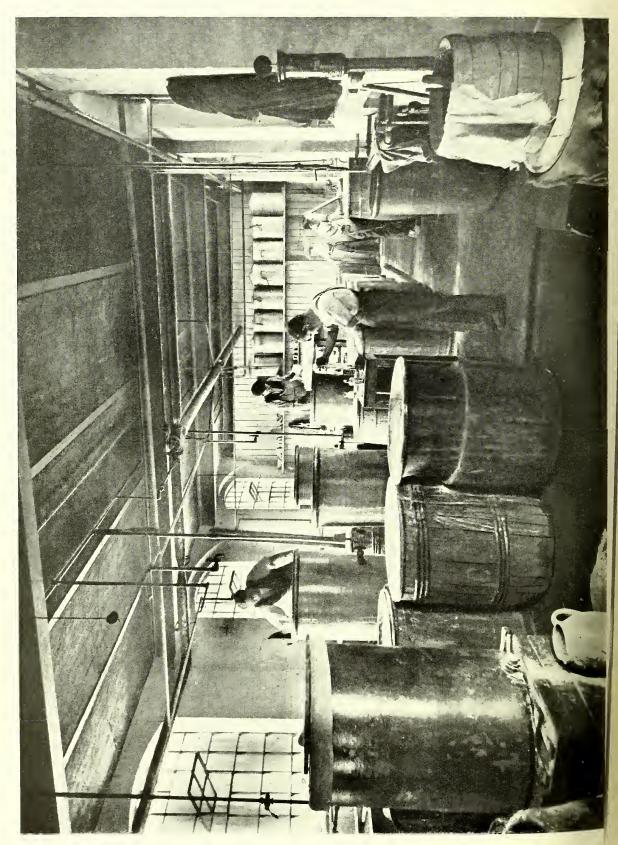
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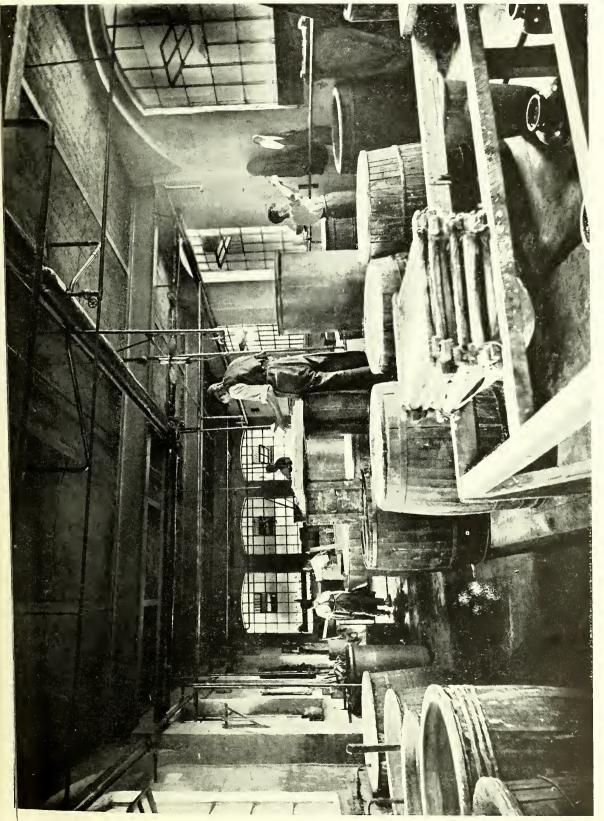


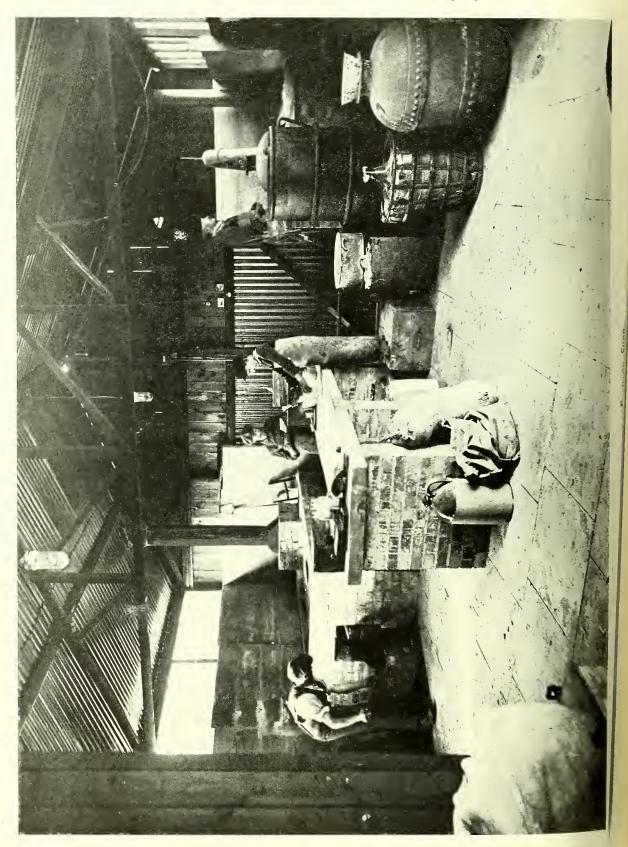
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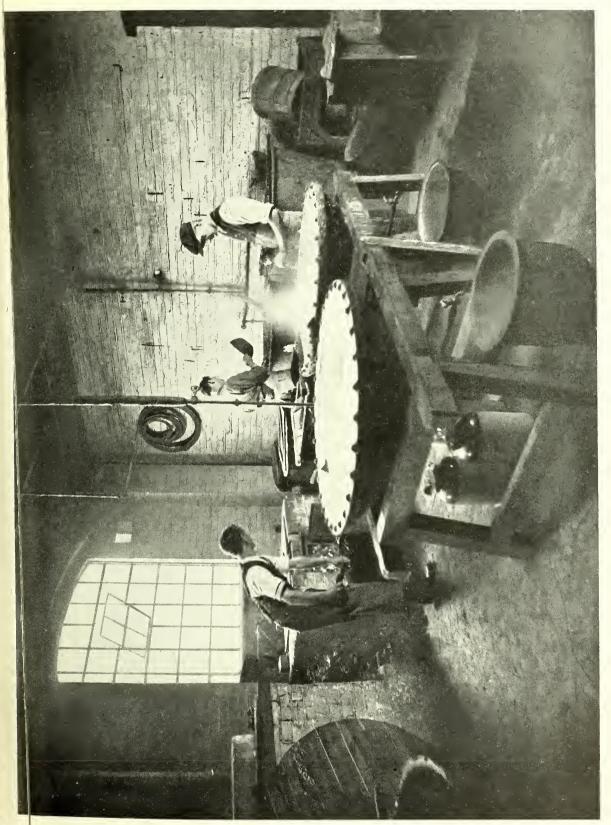


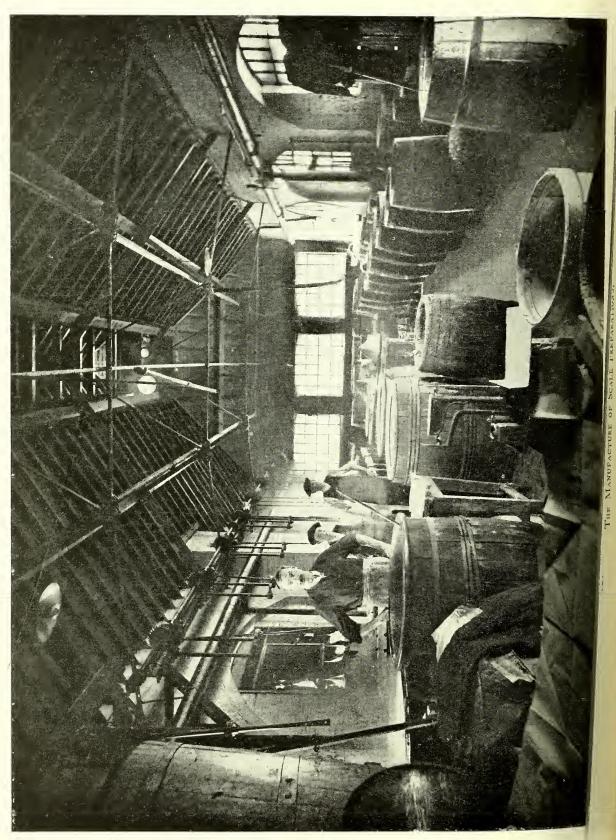
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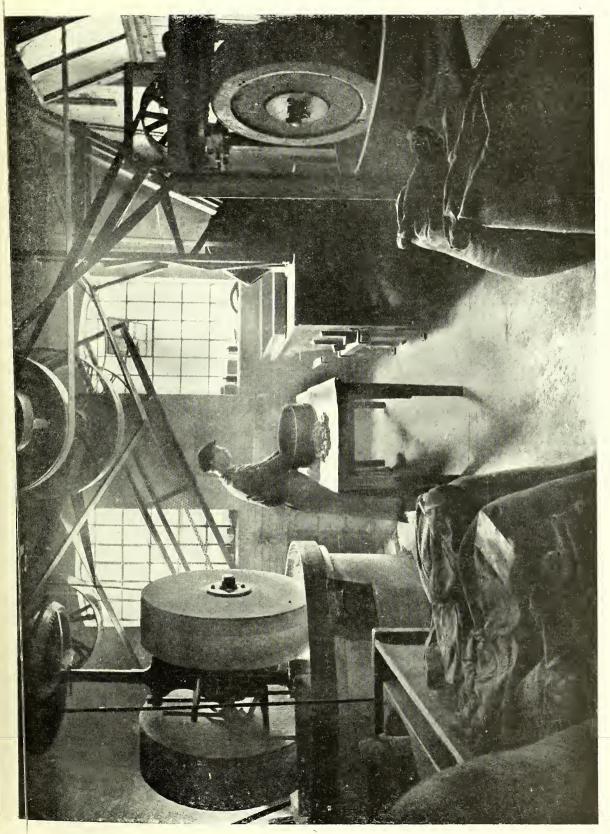


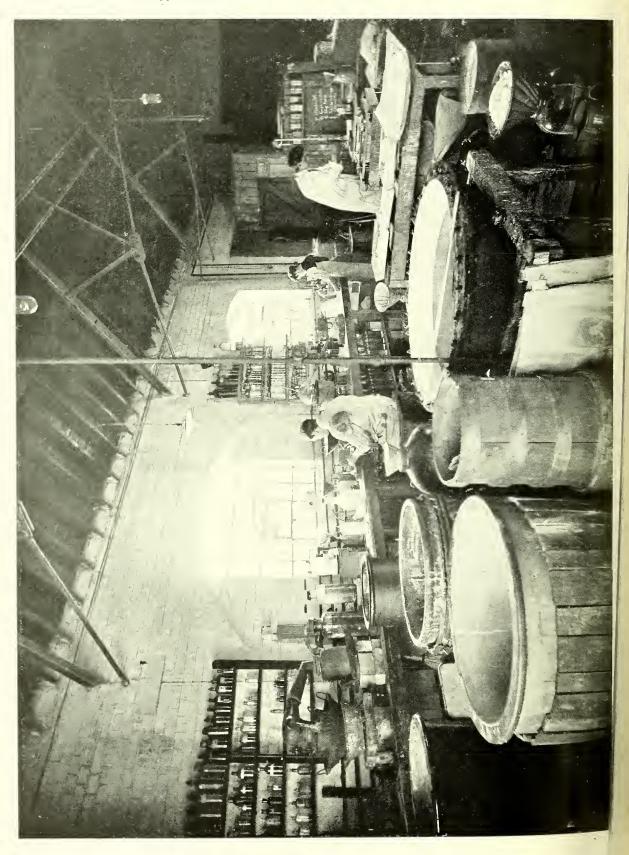
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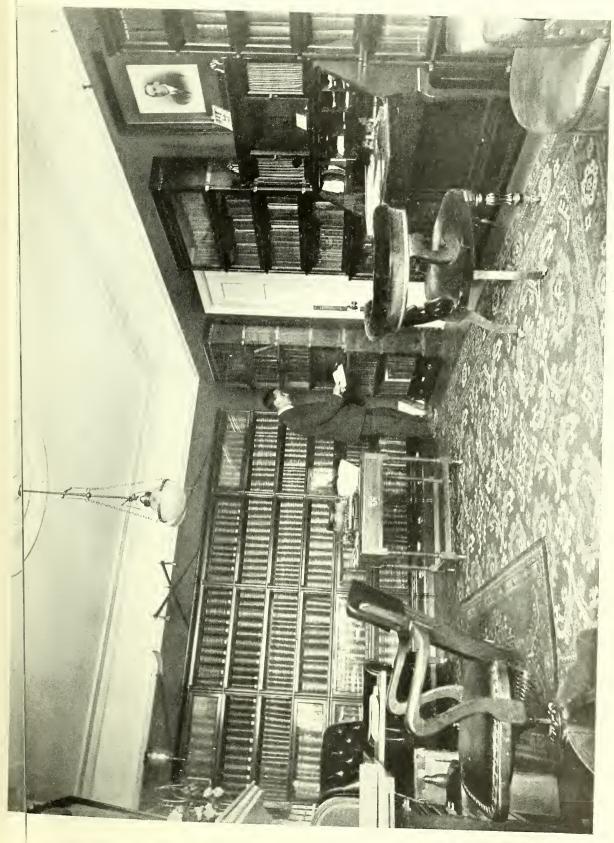


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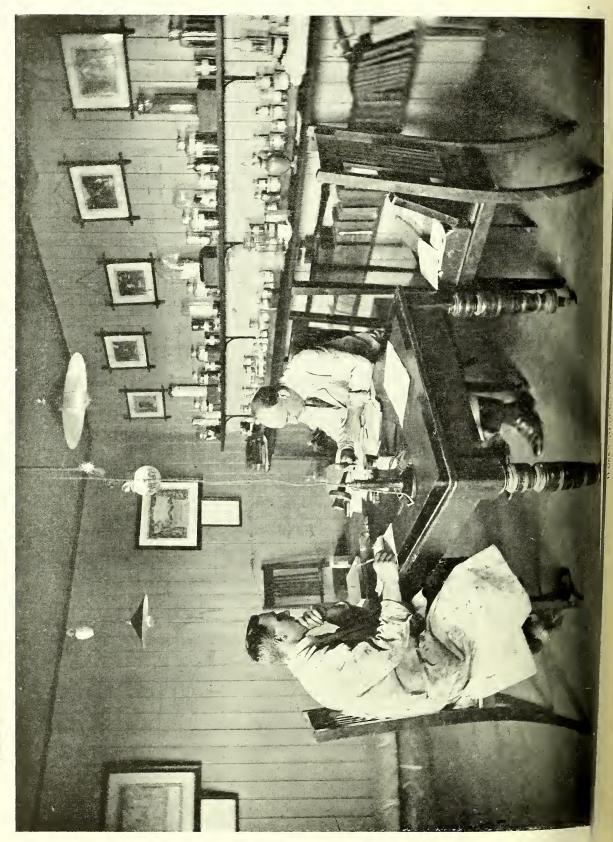




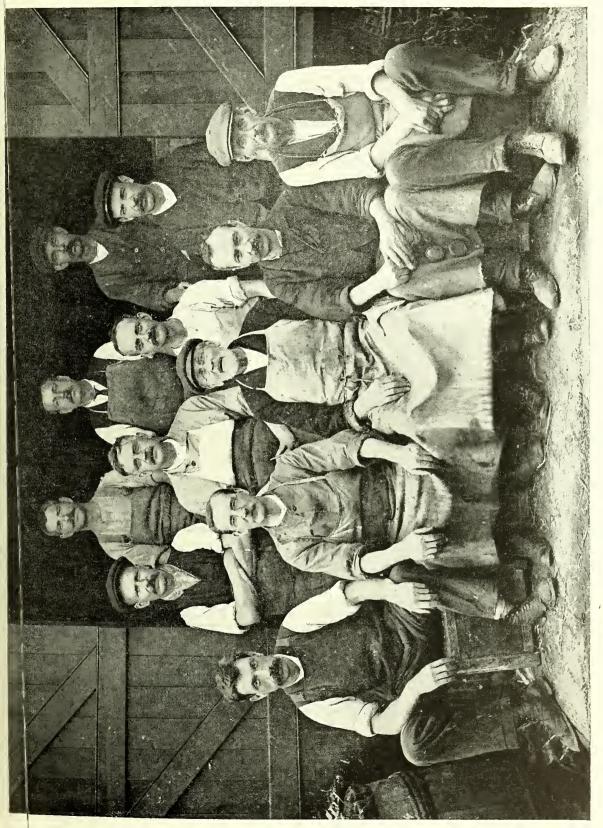
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Summerfield Chemical Works 21Aug. 15.

Mr. T. P. Morson and family

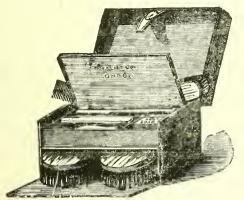
the employees of your works. Ponder's End: beg to convey our thanks for your kindness to as

this evening.

unanimous loyalty to the firm, through our popular manager Dr. Roy; and promise herewith our unswerving support, in any course they may pursue, that will enable Messrs. T. Morson & Son to maintain their long established reputation, and moreover to keep in the forefront of Manufacturing Themists

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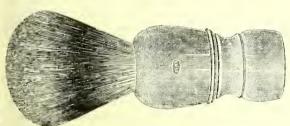


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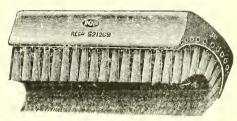
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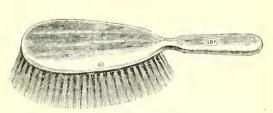
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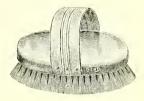
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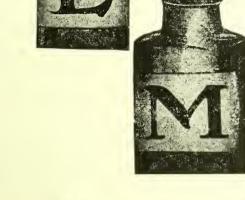
#### DRY

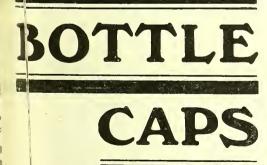
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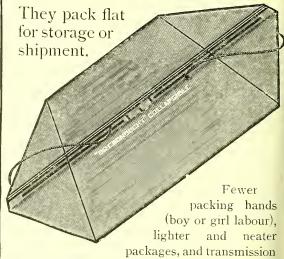
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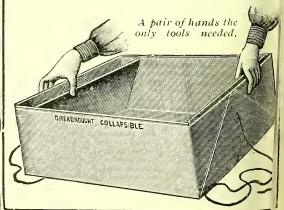
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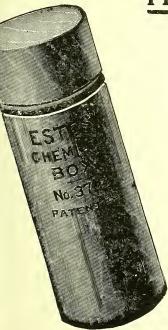


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WILL KEEP IN ANY CLIMATE.

A LARGE SELECTION OF LABELS. PACKED IN 1 DOZ. WOODEN OR CORRUGATED OUTERS.

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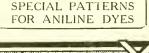
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2452

No. 2629. Toilet Lanoline ... 2667. Boracic Ointment ... 2508. Cold Cream ... 2509. Vanishing Cream ... 2452. Solid Brillientine ...

3 sizes ... 2 ,, ... 2 ,, ... 2/9, 3/9 and 5/6 per doz. 3/3 and 4/9 3/9 and 5/6

d 5/6 , 3/6 , 6/- ,

Customer's name free on 3 dozen of any one kind, and showcard supplied.

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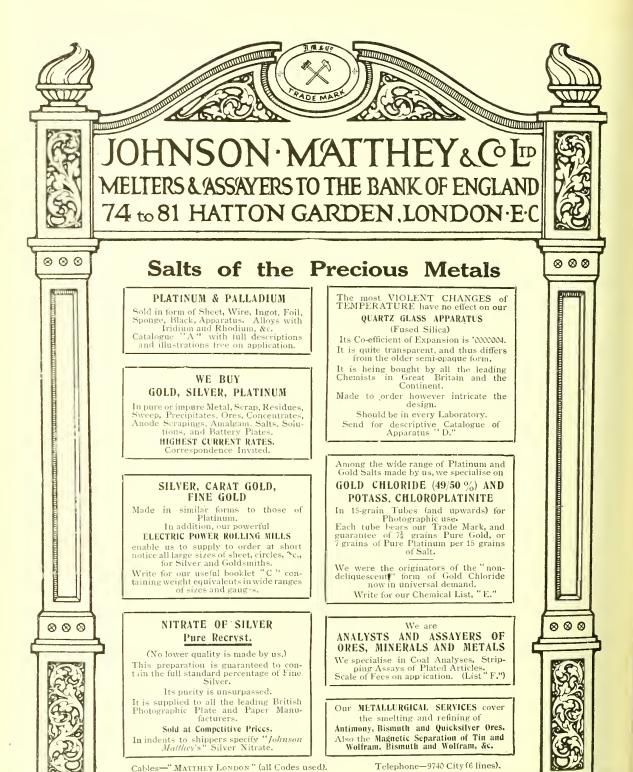
## An Open Letter to Pharmacists

Dear Sir,

For eight years we have advertised Roboleine extensively in all Medical litera-Our representatives covering the whole of Great Britain are all selling Roboleine. The result is that our output runs into tons per week. Somebody is supplying the demand. Are you? If not, you're missing something. Perhaps you've never considered the proposition in this light. Roboleine consists of Red Bone Marrow, juice from crushed calves' ribs, the finest Malt Extract, and Hypophosphites of Lime, Potash and Soda. YOU know the therapeutic value of such a combination. It is on the P.A.T.A. at 1/-, 2/9 and 5/-, and YOU know what that means. Come, sir! Why not get a few of each size from your Wholesaler? Pharmacists have made a side line of it. Those men recognise the value of repeat sales and personal recommendation. you? The outlay is small, and, moreover, there is no risk, because we will always exchange for other of our goods. nothing to think over. A halfpenny post card sets the machinery in motion. Why not post it to-day?

Yours faithfully,
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# Peptone

(FAIRCHILD)

This Peptone is of an excellent quality for every purpose for which Peptone may be employed—technical or alimentary.

PEPTONE-FAIRCHILD may be used in all bacteriological formulæ, in the usual quantities.

Supplied in  $\frac{1}{4}$ -lb. bottles at 4/-;  $\frac{1}{2}$ -lb. bottles at 7/-; 1-lb. bottles at 13/- each. Subject.

PRICES FOR QUANTITIES IN BULK TO BE HAD ON APPLICATION.

### 'ENZYMOL'

AN EXTRACT OF THE GASTRIC GLANDS. Of great proteolytic energy, containing all the soluble constituents of the glands.

- 'ENZYMOL' exerts remarkable solvent, healing, antiseptic and deodorising action in the treatment of pus cases in general; gunshot wounds, frost-bite, gangrene, abscesses, sinuses, leg ulcers, etc. etc.
- 'ENZYMOL' is painless in its action and dissolves septic matter without invading healthy tissue; peculiarly promotes cell proliferation and reparation.
- 'ENZYMOL' may be used pure, or diluted with from 1 to 3 parts of water as desired.

Supplied in 4 oz. bottles at 30/- per doz. subject.

# **GLYCERINUM PEPSINI**

CONCENTRATED (FAIRCHILD)

(50% STRONGER THAN THE NEW B.P. PRODUCT)

A glycerine extract of the peptic ferment prepared from the stomach direct and possessing every requisite of a concentrated solution of pepsin; thoroughly soluble without precipitation or cloudiness in all proper menstrua or media. It is of a guaranteed standard strength, a stable glycerole which gives a clear solution, and is free from putrescent odour.

Supplied in 4 oz. and 16 oz. (fluid measure) at 16/-and 48/- per doz., and in Winchester Quarts at 18/- cach.

These prices are subject to B. W. & Co.'s terms.

GLYCERINUM PEPSINI CONCENTRATED (FAIRCHILD) may be obtained from all wholesalers.

#### TO MAKE 24 OZ. GLYCERINUM PEPSINI, 1914 B.P.

R' Glycerinum Pepsin: Concentrated (Fairchild) ... ... 16 oz.
Acid Hydrochloric ... ... ... ... ... 40 minims.
Glycerin ... ... ... ... ... ... 4 oz. 6 drms.
Distilled Water, sufficient to produce 24 oz.

The best and cheapest means of making the B.P. product. FIGURE IT OUT AND SEE.

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### Your Photographic Trade in 1916

YOU KNOW that it is to your advantage to spread and sustain enthusiasm in photography. Are you making any special efforts?

There is one step which has always paid, and it is hearty co-operation with the publishers and advertisers of the favourite photographic annual:—

# The 'WELLCOME' Photo Exposure Record & Diary, 1916

THIS little book has proved itself to be one of the most influential means of encouraging amateur photography. It has helped many thousands of beginners to master the difficulties of exposure.

It deserves a permanent and prominent place in your photographic window. Any dealer who has taken up the sale of this book energetically will tell you so. Order a stock and display it without delay.

Trade terms: - 12/0 per dozen, less 30 %. 13 copies to the dozen. Showcards supplied



BURROUGHS WELLCOME & CO., LONDON



### Your War-time Trade in 1916

OPPORTUNITIES multiply daily with the growth of the Army. But it is mainly amongst the relatives of the men that customers are found. Most of your lady clients have husbands, brothers, or sons in training or at the front, and will be

interested in the undermentioned Outfits.

# TABLOID' BRAND Medicine (Trade Mark) Pocket-Case No. 109

A strong, japanned metal case, specially fitted with emergency medicaments, dressings, etc., for the use of officers on active service. Much appreciated, and a very large number have been sold.

Price in London 7 6, subject

### "TABLOID" BRAND FIRST-Aid

This excellent little outfit will meet the requirements of those who wish for something even smaller or at a lower price than the above. It also sells well to Volunteers, Boy Scouts, Special Constables, etc. In scarlet enamelled metal.

Price in London 2/6, subject



No. 109 'TABLOID' Medicine Pocket-Case

Measurements:  $6\frac{1}{4} \times 3\frac{1}{4} \stackrel{?}{=} 78$  in.

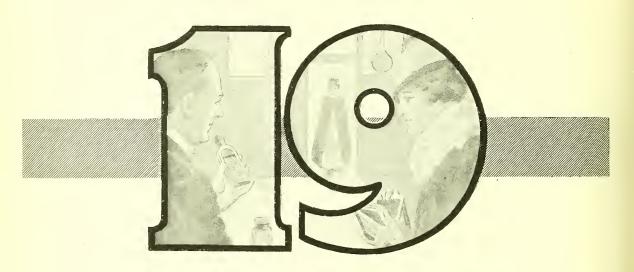


No. 710 'TABLOID' First-Aid

Measurements: 4 313 33 in.



BURROUGHS WELLCOME & CO., LONDON



### Your Family Trade in 1916

QUALITY is the sure secret of successful family trade, and, as you know, quality is the outstanding characteristic of Burroughs Wellcome & Co.'s products. Take preparations of Liquid Paraffin for instance. Here correct viscosity is essential, as well as high purity, and the B. W. & Co.'s products pass the most stringent test.

#### 'PAROLEINE'

(Trade Mark)

#### Liquid Paraffin of the Right Viscosity

It conforms to the standard laid down in the results of investigations recently published in the medical press, as essential in a liquid paraffin used as an intestinal lubricant. It is also B.P.

Supplied in bottles of 4 fl. oz. at 16/0, and 1 lb. (18½ fl. oz.) at 48/0 per dozen bottles, subject

#### 'LAXAMEL'

(Trade Mark)

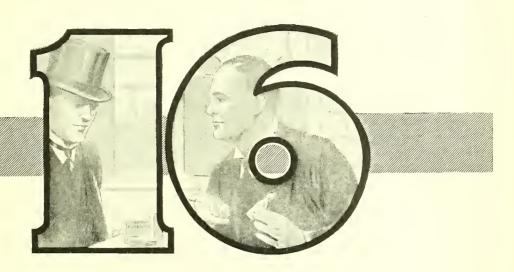
#### Liquid Paraffin made Perfectly Palatable

An attractive jelly-like preparation containing approximately 80 % of 'Paroleine.' Much appreciated by children and adults whose palates reject paraffin in any other condition. 'Laxamel' will be found to sell very readily if it is displayed in the window and on the counter along with the showcard issued.

Supplied in large glass jars at 18/0 per dozen, subject



BURROUGHS WELLCOME & CO., LONDON



## Your Medical Clients in 1916

WILL be anxious to use and prescribe British made products, provided they are of the requisite standard.

Remind your medical and dental clients occasionally that 'Wellcome' Brand Adrenalin, B.P., is manufactured at the 'Wellcome' Chemical Works, Dartford, Kent; that not only is it B.P., but also Physiologically Standardised. Its activity is therefore definite and unvarying.

# WELLCOME' BRAND Adrenalin, B.P.

### PREPARATIONS

Wellcome' Brand Adrenalin, B.P.

In tubes of gr. 1 (0.065 gm.), at 48/0 per dozen tubes

Wellcome' Brand Solution of Adrenalin, B.P., 1 in 1000 In bottles of 10 c.c., at 16/0 per dozen bottles.

Wellcome' Brand Adrenalin and Cocaine Hydrochloride In bottles of 10 c.c., at 12/0 per dozen bottles

Tabloid' Adrenalin

0.0003 gramme (gr. 1/216); and 0.001 gramme (gr. 1/65), in tubes of 12, at 12/0 and 18/0 per dozen tubes, respectively

Tabloid' Ophthal. (CC) Adrenalin

0.0006 gramme (gr. 1/108), in tubes of 12, at 12/0 per dozen tubes

Soloid' Adrenalin

0.0012 gramme (gr. 1/54); and 0.005 gramme (gr. 1/13), in tubes of 6, at 12/0 and 30/0 per dozen tubes, respectively

Soloid' Adrenalin Comp. with Eucaine, No. 1
In tubes of 6. at 20/0 per dozen tubes

- 'Soloid' Adrenalin Comp. with Eucaine, No. 2
- 'Soloid' Adrenalin and Cocaine Hydrochloride
- 'Soloid' Adrenalin with Atropine Sulphate

The above three 'Soloid' products are supplied in tubes of 12, at 12/0 per dozen tubes

- 'Hypoloid' (formerly 'Vaporole') Adrenalin, 1 in 1000
- 'Hypoloid' Adrenalin and Cocaine Hydrochloride
- 'Hypoloid' Adrenalin and Eucaine Hydrochloride

The above 'Hypoloid' products are issued in hermetically-sealed containers of 1 c.c., at 30/0 per dozen boxes of 10

'Enule' Adrenalin

0.001 gramme (gr. 1/65), at 32/0 per dozen boxes of 12

Prices are subject



BURROUGHS WELLCOME & CO., LONDON

# THE BRITISH DRUG HOUS



### CARBONIC ACID BATHS, B.D.H.

Charges for the production at home of effervescent baths, as used in the Nauheim treatment. In boxes, retail 1/6 each

### LYSOL, B.D.H.

A reliable saponaceous germicide, readily miscible with water in all proportions. In special squat bottles, with aluminium measure cups. 4, 8 and 16 fl. oz.
Also put up in "Practical Poisons" labelled (with Chemist's own name) as "CRESOL ANTISEPTIC."

### \*ESVACH WATER

The All-British Aperient. Retail 1/- per bottle.

### FERRIBYN

Malt, Marrow and Phosphates, B.D.H. A nutritive tonic, especially suitable for children. In bulk and in 4 oz. and 8 oz. bottles.

### FICOLAX

The original Fruit Laxative. Well advertised to the public. Retail 1/3 and 3/-.

### **HEROGEN**

The complete Tonic Food. In Tins, 1/6, 2/6 and 3/9.

### \*BUXTON LIVER SALT.

\*EAU de MENTE de DALMAHOY.

### HEROGEN BISCUITS

### URO-HEXOIDS

Tablets of Uro-hexene-a combination of hexamine and lithium benzoate. Successful urinary antiseptic, diuretic and In bottles of 50. Retail 1/9.

### INTERNOL

Liquid paraffin for medicinal use, of high viscosity.

In bulk, and in 4 oz., 8 oz., 12 oz. and 16 oz. bottles.

### JELLAX NURSERY JELLAX

Raspberry-flavoured jellies of petroleum for internal administration. In 1 lb., 1 lb. and I lb. jars.

### SEMPULES

An improved form of suppository. Various formulæ.

### SANUSIN **SEMPULES**

For the treatment of Hæmorrhoids. In boxes, retail 2/6.

# TABLETS for WATER

As supplied by us to the Army. One added to a pint of impure water renders it fit for drinking purposes. In pocket vials of 50 tablets.

- \*CARLSBAD SALT ("Squirrel" Brand).
- \*FROZEN FOAM, a non-greasy Toilet Cream. LIQUIDERM-Liquid Court Plaster
- \*OTANGO, for Bites and Stings

\*On the P.A.T.A.

Literature and New Showcards available for most of the above.

22-30, Graham Street, City Road, LONDON, N.

# Che Chemist & Druggist WINTER ISSUE JANUARY 29, 1916

Published at the Head Office: 42 Cannon Street, London, E.C. Branch Offices: Adelaide, Melbourne, and Sydney, Australia.

Subscription: 12s 6d. per annum, post free to any part of the World.

Price of this Issue, 1s. post free.

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### Summary.

Subscribers are advised to read this column first.

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"Guide to Preliminary Examinations."—Deals with English, Latin, arithmetic, algebra, Euclid, French, and German as required in the principal examinations recognised by ehemical, medical, and pharmaceutical bodies. Price 2s. 6d. net, by post 2s. 9d., from the C. & D. Book Department, 42 Cannon Street, London, E.C., or leading wholesale houses.

"Practical Methods of Urine Analysis."—This department of chemistry is one which those behind the drug-counter can profitably cultivate. The object of this book is to give chemists exactly the information they want on the subject. Price 2s. 6d. net, by post 2s. 9d., from the C. & D. Book Department, 42 Cannon Street, London, E.C., or leading wholesale houses.

From cover to cover this Winter Issue contains the news of the week up to Wednesday; any more of importance will be placed in the Coloured Supplement on Thursday. We are not attempting to summarise the news matter, but embody it all in the contents printed in the previous column. The summary paragraphs are confined to some of the special features of the issue.

Mr. V. Renneboog communicates some interesting observations on French and English pharmacy (p. 142).

Palladium history is exceptionally interesting, especially at present when the metal is being more used (p. 138).

A contributor tells in detail about how to make eoughmixture and put it on the market as a proprietary (p. 155).

Those interested in graduated measures are asked to study the short article on p. 134 and send us suggestions about it.

Mr. H. E. Chapman, who has served in the R.A.M.C. at Gallipoli, sends an interesting description of his experience there (p. 132).

An interesting illustrated article on tobacco deals with the history of the article, and how it is cultivated and prepared for consumption (pp. 153-155).

Mr. William P. Evans is the new President of the Liverpool Chemists' Association. His father occupied the same position in 1854-5 and in 1899. Mr. Evans' three military sons are included (p. 131).

In the article entitled "Morsons in Middlesex" we describe the origin and history of Thomas Morson & Son, Ltd., which is taking an important place in the production of medical, pharmaceutical, and technical chemicals (pp. 135-138).

Dr. S. Kitasato, whose name is associated with certain Germans in important discoveries, such as diphtheria antitoxin, is now doing splendid work in the Imperial Institute for the Study of Infectious Diseases, Tokyo. This is described in an article beginning on p. 133.

The "Whitehall Evening Post" contained 120 years ago some interesting matter about drugs and medicines (p. 143). About the same time shop-signs were in use that are described on p. 144, and in contrast with these the windows wanted at present and figured on p. 145 should be studied.

One of the most interesting articles in this number to dispensing chemists is the Scottish Central Checking Bureau in Glasgow, where Insurance Act prescriptions are priced and checked. It is the first place of the kind established in Great Britain. In view of the English work on the same subject, it is particularly noteworthy (pp. 139-142).

Among the special communications in this issue are the illustrated article on white pepper (p. 146), a retrospective study of physiological standardisation of heart-tonics (p. 147), notes for students on official galenicals (pp. 148-9), and interesting observations on the West Coast of Africa. by Mr. R. C. Wren, F.L.S., which begins on p. 150, and is illustrated with photographs.

### European War.

A Year Ago To-day.

(War News from the "C, & D.," January 30, 1915.)

We chronicled the fact that the German War Council had commandeered all the glycerin in Germany—an eloquent tribute to the effectiveness of the British Fleet, which had tribute to the effectiveness of the British Fleet, which had kept out the supply of oils and fats from which glycerin—indispensable in warfare—is prepared. Some interesting views on the war were printed from correspondents in the United States, which showed that the German element in that country, although noisy, does not represent American opinion. A note was given regarding the reasons for the scarcity of lecches. Portraits of several chemists on active service were a feature of the Winter Issue.

### Pharmaceutical Roll of Honour.

The following connected with pharmacy in Australia and New Zealand are serving with the Forces of the Commonwealth or the Dominion:

CAREY, T. C., Queensland, Second-Lieutenant.

DOYLE, G. P., Quartermaster-Lieutenant (Drysdales, Ltd.,

Doyle, G. P., Quartermaster-Lieutenant (Drysdales, Ltd., Brisbane). In charge of base hospital, Brisbane.

Lane, J. C., pharmacist, Grafton, N.S.W., Australian Expeditionary Force.

McMullan, T. H., Staff Sergeant, Queensland. In charge of Field Hospital, Enoggera.

NISH, W. M., pharmacist, Kiama, N.S.W., Australian Expeditionary Force.

Tair, J. D., Corporal, son of Mr. Robert Tait, Hawera, N.Z., 7th N.Z. Expeditionary Force, A.M.C.

Thomson, A. N., pharmacist, Featherston, N.Z.

Woods, W. G. (son of Mr. W. E. Woods, Sydney), R.F.A., Special Reserve of Officers. Special Reserve of Officers.

### Pharmacists in the Army.

"The Chemist and Druggist of Australasia" gives the following summary by Mr. T. M. Young of the relief to the medical officer which could be afforded by pharmacists:

The Army Medical Officer would be relieved of routine duties by a licutenant pharmacist, who should be a registered pharmacist, with business experience, and not under twentysix, as follows:—

1. Requisitioning of drugs and medical stores and proper

1. Requisitioning of drugs and medical stores and proper handling.
2. Assisting the medical officer, as directed, at sick parades by preliminary inspection of patients, dealing as instructed by his C.O. with blistered feet, cut fingers, constipation, diarrhœa, boils, toothache, and other minor complaints.
3. As person first referred to in cases of doubt on the part of subordinates, such as in the case of food questions, which he could easily settle. Although this point is important, it should not be magnified. There are often sensible questions asked as well.

asked as well.

4. Taking full charge of dispensary and contents. Supervision and full responsibility for all dispensing. (Though not if a mistake occurs where he has not previously been referred

oto.)

5. Responsibility for all returns and forms.

6. Responsibility for sterilisation of instruments and appliances.

7. In field ambulance work, taking control of hospital in camp, so that the medical officer will be free to move with the medical scheme.

ambulance in a factical scheme.

8. Recording all proceedings of medical boards in camps or elsewhere on cases (such as accidents, etc.) when compensation may have to be paid, or proceedings of medical boards appointed for other purposes.

may have to be paid, or proceedings of medical courses appointed for other purposes.

Additional duties might be allotted at the discretion of the commanding officer, such as:—

(a) Analysis of urine.

(b) Taking of swabs for bacteriological examination.

(c) Extemporisation of supplies on emergency.

(d) Inspection of drugs and supplies; in other words, seeing that medical supplies are up to sample, as per contract, and stocks of supplies on transport ships, etc.

This should be read in connection with the suggestions of Major E. S. Peck before the British Pharmaceutical Conference (C. & D., July 17, 1915, p. 43).

### Export Notices.

NETHERLANDS.—The following measures concerning the exportation of certain articles from the Netherlands have recently been taken: The prohibition imposed by the Decree of December 13, 1915, on the exportation of "Turkev red oil and similar preparations consisting of sulphated and wholly or partly saponified oils" is, in virtue of a Royal Decree of January 7, 1916, replaced by a prohibition on the exportation of "Turkey red oil and similar preparations consisting of sulphated and wholly or partly saponified oils" is, in virtue of a Royal Decree of January 7, 1916, replaced by a prohibition on the exportation of "Turkey red oil and similar preparations consisting of sulphated and wholly or partly saponified oils" is, in virtue of a Royal Decree of January 7, 1916, replaced by a prohibition on the exportation of "Turkey red oil and similar preparations consisting of sulphated and wholly or partly saponified oils" is, in virtue of a Royal Decree of January 7, 1916, replaced by a prohibition on the exportation of "Turkey red oil and similar preparations consisting of sulphated and wholly or partly saponified oils" is, in virtue of a Royal Decree of January 7, 1916, replaced by a prohibition on the exportation of "Turkey red oil and similar preparations consisting of sulphated and wholly or partly saponified oils" is, in virtue of a Royal Decree of January 7, 1916, replaced by a prohibition on the exportation of "Turkey red oil and similar preparations consisting of Synonyms." Contains 296 pages, and consists of formulas for medical prescriptions.

Stream Royal Pharmacoperias."—Uniform with the "Chemist's Dictionary of Synonyms." Contains 296 pages, and consists of formulas for medical prescriptions.

other preparations consisting of sulphated oils, whether saponified or not." A Royal Decree of January 8 prohibited the exportation of stearine and other fatty acids, paraffin, and mixtures and products of these articles. The Decree was published on January 13.

NORWAY.—The Board of Trade are in receipt of telegraphic information from H.M. Minister at Christiania to the effect that the exportation of amyl alcohol (fusel oil) from Norway has been prohibited.

Sweden.—The following exports have been prohibited as from January 13: Cleaning or polishing substances (whether solid, in the form of powder, or liquid) produced from soap, fat, or oil, with addition of other substances.

### Personalia.

PRIVATE KENNETH NORMAN, son of Mr. Valentine Norman, pharmacist, Leighton Dene, Godalming, is serving at the Front with the 18th Royal Fusiliers, the first Universities' and Public Schools' Battalion. The "Surrey Times" of January 22 contained fully a column of Mr. Kenneth Norman's experiences at the Front.

Mr. Kenneth E. Wootton, younger son of Mr. H. Wootton, B.Sc., Principal of the London College of Pharmacy, has been gazetted second-lieutenant in the 10th London Regiment. He has been months training in the Artists Rifles O.T.C. Captain Leonard H. Wootton, elder son of Mr. H. Wootton, has served ten months in Flanders, and is now at Salonica with the 3rd London Field Ambalance.

LANCE-CORPORAL WILLIAM KEATING, 11th Battalion Lancashire Fusiliers, who was, prior to enlisting, with H. D. Pochin & Co., Ltd., manufacturing chemists, of Bank Quay. Warrington, has been awarded the Distinguished Conduct Modal. Prior to a night raid on the German trenches on Decomber 8 he canadad to the December 8 he crawled to the enemy wire entanglements, and spent three hours and twenty minutes in cutting a passage through.

CAPTAIN C. T. PACKARD, 9th Suffolks, has been mentioned in despatches and awarded the Military Cross "for conspicuous gallantry at Loos on September 26, 1915. He remained behind when retirement had been ordered, and assisted a wounded man back from the firing-line, bringing him 400 yards under heavy fire. He also rallied a platoon under heavy fire and led them back to their original position." Captain Packard is a son of Alderman Edward Packard, Ipswich, and one of the directors of Edward Packard & Co., Ltd., chemical-manufacturers, Ipswich and Bramford. Bramford.

CAPTAIN TYSON KIRKBY, who for sixteen years has been

CAPTAIN TYSON KIRKBY, who for sixteen years has been connected with the Canadian wholesale drug-trade, at one timo with the National Drug and Chemical Co., Ltd., at Winnipeg, and for the last eight years with the Gordon Mitchell Co, in the same city, holds a commission in the 100th Winnipeg Grenadiers, and came over to this country. and came over to this country on October 19, 1915. Mrs. on October 19, 1915. Mrs. Tyson Kirkby and their little son also came to Folkestone. When the war is over the captain proposes to take up his old occupation.

Among those members AMONG those members of the A.M.C. drowned in the sinking of the Marquette, which was torpedoed in the Ægean Sca, were Messrs, C. Fred Perrin, James Bird, and Victor Rhodes, who



CAPTAIN KIRKBY.

and Victor Mindels, Will Captain Kirker. before enlistment were chemists' assistants at Wan ganui, N.Z. Mr. J. T. Ross, who was also drowned, was formerly an assistant at Christchurch, N.Z.

Belgian Doctors' and Pharmacists' Relief Fund.—A subscription has been received this week from Mr. A. Chapman of 10s. 2d., the proceeds of dependents' prescriptions.

### English and Welsh News.

Subscribers are invited to send to the Editor newspapers containing matters of trade interest. The items should be indicated.

Institute of Chemistry.

The results of the examinations of the Institute recently held in London show that three candidates passed the Intermediate examination—viz., H. E. Cox, B.Sc. (Lond.), A. J. Somer, and E. E. Wells, B.Sc. (Lond.); nine candidates passed the Final (A.I.C.) examination—viz., R. G. Browning, B.Sc. (Lond.), in the branch of mineral chemistry; R. Brightman, R. L. Brown, A.R.C.S.I., H. S. Foster, and A. Hancock, in the branch of organic chemistry; and C. E. Corfield, J. J. Geake, F. A. Pickworth, B.Sc. (Lond.), and Fred Smith in the branch of the chemistry (and microscopy) of food and drugs, fertilisers and feeding-stuffs, soils, and water. held in London show that three candidates passed the Inter-

Contracts.

Burgoyne, Burbidges & Co. have advised the East Ham Town Council that, owing to the increased cost of cod-liver oil and the additional labour involved in making up the same in small quantities, they would be unable to continue the supply at current prices. The Corporation has been recommended to authorise the medical officer of health to obtain from the firm a quotative of the continue that and so a bottle. tion for supplies in 6-oz. and 8-oz. bottles.

The following tenders have been accepted by St. Pancras The following tenders have been accepted by St. Pancras Borough Council for annual supplies: Adeocks, soluble creosoto or disinfectant fluid, 93d. per gal.; disinfectant pine fluid, 103d. per gal., subject to deliveries being postponed if supplies are interrupted through strikes or other unexpected causes. Sanitas Co., Ltd., pine blocks in tins, Il. 9s. 6d. per cwt., ditto. A. C. Young & Co., carbolic powder, 4s. 6d. per cwt., subject to delays or conditions which may arise out of the war.

### Sale of Food and Drugs Acts.

Five samples of borie-acid ointment recently examined in Westminster were genuine.

During the past quarter the public analyst for Wandsworth analysed 287 samples under the Food and Drugs Acts, 133 of which were informally taken. Twenty-four samples were found to be adulterated—twelve formal and twelve informal.

Included in the fifty-one samples of food and drugs analysed during the past twelve months by the public analyst for Grantham were samples of sweet spirit of nitre, tincture of rhubarb, and camphorated oil. All of the samples specified were found to be genuine.

There were analysed in the borough of Poplar during the past quarter two samples of olive oil, two of glycerin, two of crushed linseed, two of ground alum, and one each of Gregory's powder, grey powder, and ammoniated tincture of quinine, all of which proved to be genuine and up to

the standard of the B.P.

One sample of tincture of rhubarb, one of One sample of tincture of rhubarb, one of syrup of rhubarb, one of ammoniated tincture of rhubarb, one of borie ointment, one of paregoric, one of castor oil, two of ginger-wine, one of raspberry-wine, one of port wine, one of orange-wine, and one of elder-wine were analysed ecently by the Luton public analyst. All the samples proved to be genuine, but a sample of ginger-wine was eported to contain salicylic acid equal to 0.327 gr. per int. A slight amount of benzoic acid was also found in our other samples of the wines our other samples of the wines.

Mr. A. H. Mitchell Muter, F.I.C., public analyst for the orough of Lambeth, reports having analysed during the ast quarter four samples of cream of tartar, six of lycerin, four of Gregory's powder, and six of ammoniated ncture of quinine, all of which, with the exception of one mple of cream of tartar, were taken informally. The eam of tartar and another sample of the same drug were tilied to contain 44 parts of lead por million. In rtified to contain 44 parts of lead per million. In ldition to the above, three informal samples of arrowroot re also analysed and found to be genuine.

Liverpool.

The issue this week of election addresses by candidates the Council of the Liverpool C.A. denotes the vitality the Association.

After the war many trench comforts will find a sale for Inics, offices, and workrooms. The letters of appreciation

Innes, offices, and workrooms. The letters of appreciation me the trenches flow in a constant stream. Sain & Co., Lime Street, display in front of a mirror a half effective pyramid of packets of three of their own parations: "Menthol and eucalyptus," "Glycerin pastis," "Glycerin and black currant." The arrangement is such that light on the labels is caught from two sides.

a any packet can be detached without weakening the pamid.

Tardy deliveries of drugs, both inwards and outwards, harass the wholesale and the retail trades considerably. Something should be attempted, either through the Chamber of Commerce or the Board of Trade, to expedite the transit of packages, the due receipt of which may often be a matter of life or loss of life.

Among the latest trench comforts sent from Liverpool are coffee, sugar and milk tablets, cocoa, sugar and milk tablets, milk-powder, half cream, anti-frost balm, trench ointment. France and Flanders are described as littered with the tins in which these comforts were packed,

A rare chance for the makers of tin toys.

Here is an illustration for the need of a packing-case clearing-house. A Hanover Street firm received permission from a railway company to return by rail twenty-eight huge cases. The twenty-eight were sent on a horse-lorry, which was kept waiting at the railway depôt for two hours, when permission was rescinded. The lorry returned, but the floor-space occupied by the cases had been refilled. After four and a half hours warehouse room was found for

the cumbrous cargo.

On the complex question of the half-day holiday for on the complex question of the half-day holiday for retail chemists and druggists, the experience of the central area is interesting. On the closing days in either the inner or the outer suburbs the rush into the heart of the city is remarkable, not only for such urgent prescriptions as those in eases of meningitis, but for articles so simple as eastor oil. The latter demand shows domestic lack of foresight, but the former strongly suggests that total closure would spell disaster. From a sense of duty to the public,

would spell disaster. From a sense of duty to the public, pharmacists open regularly on Sunday evenings, although their receipts are apt to be as low as a few pence, and the average amounts but to a trifle in the shilling column.

Mr. H. Humphreys Jones, F.C.S., in his election-address (a four-page quarto eircular), mentions that "Owing to the state of the country during the past year and a half, the work from a social point of view has been at a standstill. This decision was arrived at by the Council, who undoubtedly correctly gauged the feelings of the members in this respect. During the first eighteen months however. in this respect. During the first eighteen months, however, the Association, by common consent, has never had such a series of brilliant gatherings as the complimentary dinners to 'the grand old man' of pharmacy—Dr. Symes, and to Mr. Edmund White, B.Sc., F.I.C., President of the Pharmaceutical Society. The latter social event was unique in that we in Liverpool had the honour of being the first Association to entertain him in his official capacity as Pre-Ribble Valley, this certainly constitutes a record in the history of Pharmaceutical Associations. Needless to say, strenuous efforts to emulate these successful functions would have been made later had this been possible."

### Sheffield.

Mr. J. Gilbert Jackson has issued a very artistic calendar, "Sunshine and Shade," 3 in by 9½ in., on khaki mount. Mr. G. T. W. Newsholme's health is again unsatisfactory, and he has temporarily had to relinquish his public duties. Since the Christmas rush there has been a distinct falling off in trade generally. The figures show not nearly so great a reduction in Insurance scripts as was expected for last

Some dissatisfaction is felt by chemists at the attempt by a section of medical men to reduce the drug account of Insurance patients by issuing prescriptions composed of a simple drug with directions for use, which carries only a reduced dispensing-fee.

In local circles there is somewhat of a feeling that stronger efforts should be made in pharmaceutical matters.

stronger efforts should be made in pharmaceutical matters, and that the West Riding of Yorks should be more directly represented at headquarters. A joint meeting is to be held at Leeds shortly with this end in view.

The Medical Supply Association is advertising largely hot-water bottles 10 in, by 8 in, at 4s. 3d., 12 in, by 8 in, at 4s. 9d., and 12 in, by 10 in, at 5s. 6d. Chemists evidently do not intend to lose this trade, as most of them are exhibiting bottles quito as good at competitive prices.

At an inquest at Carcroft on January 21 regarding the death of G. H. Walker, a miner, the jury returned a verdict that death was due to inflammation of the heartmuscle caused by influenza. The jury added a rider directing the Coroner to call the attention of the chemist to his delay in dispensing a prescription for the deceased's medicine. medicine.

### Miscellaneous.

ONE THOUSAND RESPIRATORS for the London Fire-brigade have been purchased by the London County Council.

BRIGHT LIGHT.—At Dorking on January 15, Mr. H. C. Stocks, manager for the Timothy White Co., Ltd., was fined 11. for infringing the lighting order at the company's shop, 86 High Street.

LAUDANUM-POISONING.—A suicide with laudanum is reported from Barnsley. The medical witness at the inquest said the deceased woman had probably taken an ounce and a half of laudanum.

1)R. Trevor, pathologist, told the Westminster Coroner last week that he could not get bottles for his museum except at big prices. Another medical witness carried away the medicine-bottle from a dead patient's home

because of the scarcity.

"THE ARMY AUTHORITIES now accept women dispensers," aid the Manchester "Daily Dispatch" on Friday, January 21, "and the London County Council is now training girls to be chemists." It illustrated its statement with a picture of a lady student with hurette and Bunsen burner in operation. The "Daily Mail" on the same day published portraits of two other L.C.C. girl students weighing chemicals chemicals.

EXPORTING OPIUM.—The case regarding the export of opium contrary to the Customs (Export Prohibition) Act (see C. & D., January 22, p. 36) was concluded at Bow Street Police Court, London, on January 25. Since the hearing which we reported another defendant, named Robinson, had been included in the case. The Magistrate imposed the following fines: Cohen, 500L: Robinson, 200L: and Horne, 1007. The fines were paid before the rising of the Court the Court.

LAMBETH DRUGS.—In the borough of Lambeth during the last quarter one formal and nineteen informal samples of drugs were analysed, one formal and one informal sample of cream of tartar being certified as adulterated. The formal sample contained 44 parts of lead per million, and the informal sample also 44 parts of lead per million, and Thre- other samples of cream of tartar were certified as genuine, as well as six of glycerin, four of Gregory powder, and six of ammoniated tincture of quinine.

and six of ammoniated tincture of quinine.

Growth of the Dye-industry.—Sir Algernon Firth, at the annual meeting of the Huddersfield Chamber of Commerce on January 21, stated that the British Dyes, Ltd., is going to be a great success, and already there is a demand from America, Canada, and Australia for the aniline dyes made by the company. The Advisory Committee, which has been formed to consider what is necessary to do to counteract German competition, has made a report which will be published shortly. The Mayor of Huddersfield said the output of dyes has been doubled since British Dyes, Ltd., took over the business of Read Holliday British Dyes, Ltd., took over the business of Read Holliday & Sons. Already 500,000%, has been spent on new plant which has been fixed, and another 250,000%, has been spent on plant now being made which is to be used for dyes not hitherto manufactured in this country.

Bath College of Pharmacy.—At the recent terminal examinations the following awards were made:—Silver Medal: Mr. Gwynne Beynon. Bronze Medals (Practical): Mr. E. W. James; (Theory), Mr. J. R. Jones. Remington Prize (presented by Burroughs Wellcome & Co.): Mr. J. E. Bowen. Certificates of Merit: Chemistry and Physics, Messrs. Gwynne Beynon, J. E. Bowen, F. R. Callow, B. T. Evans, E. W. James, J. R. Jones; Pharmacy and Latin, Messrs. Gwynne Beynon, J. E. Bowen, E. W. James, J. R. Jones, W. H. Smith; Botany, Messrs. Gwynne Beynon, E. W. James, J. R. Jones, G. D. Lydgett; Materia Medica, Messrs, H. S. Aplin, Gwynne Beynon, J. E. Bowen, F. R. Callow, E. W. James, J. R. Jones, G. D. Lydgett, W. H. Smith; Practical Chemistry, Messrs. H. S. Aplin, Gwynne Beynon, F. T. Card, E. W. James, J. R. Jones, C. C. Thomas: Dispensing, Mrs. M. Lloyd Jones, Messrs. H, S. Aplin, Gwynne Beynon, J. E. Bowen, E. T. Card, F. R. Callow, B. T. Evans, C. M. Good, E. W. James, J. R. Jones, G. D. Lydgett, W. H. Smith; Practical Chemistry, Messrs. H. S. Aplin, Gwynne Beynon, J. E. Bowen, E. T. Card, F. R. Callow, B. T. Evans, C. M. Good, E. W. James, J. R. Jones, G. D. Lydgett, W. H. Smith, C. C. Thomas. BATH COLLEGE OF PHARMACY.—At the recent terminal

### Irish News.

Subscribers are invited to send to the Editor newspapers containing matters of trade interest. The items should be indicated.

Brevities.

Master Joe Ritchie, son of Mr. Joseph Ritchie, Ph.C., dispenser at the Rumford Street Dispensary, Belfast, obtained fifth place in Class D in a competition run by "Lady of the House" for "Little Irish Beauties," Sir Stanley Harrington, of the Cork Chemical Drug Co., has been elected a member of the governing body of the Cork University College. Sir Stanley has also been elected a Vice-President of the Cork Volunteer Training Corps. Mr. Walter Thorpe, analyst, Dublin, has agreed to accept 181. a year remuneration for his work as analyst to the Newcastle West Board of Guardians; and the latter have agreed, subject to the sanction of the Local Government Board.

The Pharmaceutical Society of Ireland, 67 Lower Mount Street, Dublin, is advertising in the Coloured Supplement for an examiner in practical pharmacy. The vacancy is occasioned through the retirement of Mr. James Guiler, M.P.S.I., his full term of five years having expired.

### Scottish News.

Subscribers are invited to send to the Editor newspapers containing matters of trade interest. The items should be indicated.

Dundee.

Mr. George J. Lindsay, 111 Nethergate, Dundee, is having his annual sale. Everything is reduced in price except proprietary articles.

The effect of the recent advance in medicine stamp-duty on Tiz has not been beneficial to chemists. They have had to provide the additional stamps required for stock in hand and go on selling at the same price as before; for though the retail price has been fixed at 1s. 3d., the minimum cutting-price of 1s.  $1\frac{1}{2}d$ . is that which is advertised to the

Edinburgh.

The Earl of Rosebery was the guest of the Edinburgh Rotary Club at their weekly luncheon last week.

Mr. D. Kerr and Mr. D. Gourlay, with Harkness, Beaumont & Co., Edinburgh, have been placed in the Army Reserve.

It appears that most chemists and chemists' assistants who, after being called up, have appealed are put back ten groups.

At Broxburn Oil-works on Monday female labour was introduced for the first time, they being wanted in the candle-making department, at 15s. a week to begin with.

Mr. J. F. Ross is now taking the place of Mr. McLedingham and Mr. A. W. Calder (who have joined the Army) as representativo of Ayrton, Saunders & Co., Ltd., Liverpool.

A correspondent of a local newspaper suggests that, as bottles are becoming scarce and dear, householders should send any they possess to some central organisation, where they could be sold to benefit patriotic funds.

Lord Mackenzie, sitting in the Court of Sessions last week, heard the case of Guyot Guenin & Son, wholesale merchants, Southwark Bridge Road, London, against the Clyde Soap Co., Petershill Road, Glasgow, for 341., being the price of Hoffman's starch sold and delivered to the defenders. The pursuers denied that they were agents for the Capman firm and stated that they were principals in the German firm and stated that they were principals in the transaction. His Lordship is to report to the first division of the court.

Glasgow and the West.

Practically all the Stirling chemists now close from 1 to 2 p.M., while 7 p.M. is the general closing-hour for the day. There has been a brisk demand for toilet-soaps during the past week. The prospect of an alteration in price or size of the popular twopenny tablet is the cause. A meeting of the Board of Management of the Chemists' Friendly Society was held in Glasgow on January 21, Mr. J. M. Smith (Vice-President) in the chair. Final arrangements were made for the annual meeting on January 27. Higher still and higher the prices of drugs go. Local chemists now find the 1916 National Insurance Tariff to come as a "boon and a blessing to men," for an addition of 25 per cent. to 50 per cent. brings a relative retail price Practically all the Stirling chemists now close from 1 to

come as a "boon and a blessing to men," for an addition of 25 per cent. to 50 per cent. brings a relative retail price according to each individual's scale, while the monthly "Starred List" keeps matters right.

The Glasgow and West of Scotland Chemists' Association, in conjunction with other business organisations, are taking steps to secure a reduction of the telephone charges. It may be mentioned that the chemists used to enjoy for 5t. per annum an unlimited telephone service under the City Corporation. For the same service the Post Office now Corporation. For the require 12l. (see p. 119). For the same service the Post Office now

A local writer in Buteshire lays stress on the possibilities of the island for producing medicinal herbs. There the peasant folks utilise many medicinal plants which grow wild in abundance. Chamomile is especially plentiful, and it is stated that the climate is well suited for the cultivation of it and many other herbs used in medicine. This being or it and many other herbs used in medicine. This being so, such a venture should prove profitable on account of the good facilities for conveying the produce to wholesalers in Glasgow or even to Edinburgh. Many rare and beautiful specimens are found among the flora of Bute and other islands in the Firth of Clyde which are not found on the mainland. These islands are therefore the happy huntingground of Glasgow botanists.

Chest and lung pines and cough-mixtures are the main Chest and lung pines and cough-mixtures are the main features in the windows out Finneston way, but McLean & Gowans, St. Vincent Street and Angyle Street, have two very pretty windows well arranged with Velocene, hazeline snow bismuthated magnesia, and quinine and iron tonic. Mr. J. C. Riddell has also a pleasing display of British cau de Cologne. Mr. John Neil, chemist, Sauchichall Street, retains the professional specie jar and carboy, but has also a display of so'dners' sachets and pest-killers. Soap-displays occupy the majority of other chemists' windows. This week's feature of Mr. M. F. Thomson's toilet and perfumery Paradise is the artistic display of minute. and perfumery Paradise is the artistic display of minute many coloured electric globes, which are nightly lighted and attract much attention.

A meeting of representatives of trade associations was held in Glasgow on January 21 for the purpose of lodging a protest against the proposed new telephone charges. Mr. G. Shiach Kitchin, Sccretary of the Chemists' Association, was in the chair. Mr. J. M. Crosthwaite, Secretary of the Retail Drapers' Association, explained that he had been in communication with the Corporation regarding the matter, and had received assurances that the matter is having attention. Ex-Bailie McFarlane made a statement as to the position of the Corporation, and asked the meeting to do all in its power to strengthen the hands of that body in the representation which it is intended to make to the Government. It was clearly understood when the Government took over the Corporation telephone system that before any alteration was made in the charges the Corporation would have an opportunity of making representations before a Select Committee. It was arranged that a public meeting be held on February 3 when the whole position will be explained and the necessary steps taken to try to retain the present rates or at least to modify considerably the proposed charges.

Prices of Proprietaries

Although we are still awaiting the publishing of a uniform price-list for the county, the following is a rough list of the general prices prevailing in Fife: Allenbury's food, 1s. 6d., 3s.; Allenbury's food, No. 3, 1s., 2s.; Alcock; plasters, 9d.; Antipon, 2s. 6d., 4s. 6d.; Angier's emulsion, 1s. 3d., 2s. 9d., 4s. 6d.; Andrew's liver salt. 5d.; Antexema, 1s. 3d., 3s.; Beecham's pills, 1s., 2s. 9d.; Blanchard's pills, 1s. 3d.; Bow's liniment, 3s.; Brand's essence of beef, 1s. 6d.; Brand's essence of chicken, 2s. 3d.; Brown's chlorodyne, 1s. 3d.; Budden's balsam, 1s. 3d., 3s.; Bunter's nervine, 1s. 3d.; Budden's ointment, 9d., 1s. 3d.; Bragg's charcoal biscuits, 1s.; Californian fig-syrup, 1s. 2d., 2s.; Calvert's tooth-powder, 5d., 10d.; Cassel's tablets, 1s., 3s., 1s. 3d.; Cockle's pills, 1s. 1½d.; Coutts' acetic acid. 1s. 3d., 2s.; Cuticura soap, 11d.; Cuticura ointment, 2s. 7½d.; Cuticura pills, 1s. 3d.; Colgate's dental cream, 6d., 1s.; Colgate's shaving-stick, 10½d.; Doan's kidney pills, 2s. 9d.; Doan's dinner pills, 1s. 3d.; Dinneford's magnesia, 1s.; Edwards' harlene, 1s., 2s., 4s. 3d.; Eno's fruit-salt, 2s. 4d., 4s. 4d.; Elliman's embrocation, 1s. 3d., 2s. 9d.; Elliman's royal embrocation, 1s., 2s.; Falconer's golden compound, 1s. 2d.; Elliman's fellows' syrup, 3s., 5s.; Glickon's salve, 9d., 1s. 3d.; Guy's tonic, 1s. 3d., 3s.; Hool's medicine, 1s. 3d.; Horlick's mills, 1s. 6d., 2s. 6d.; Jeves' fluid, 6d., 1s.; Iodex, 1s. 3d.; Joy's cigarettes, 2s. 6d.; Keen's corn and cold cure, 9d.; Kuthow's powder, 3s.; Lockyer's hair-restorer, 1s. 6d.; oatine cream, 1s. 3d.; orileen capsules, 3s.; Owbridge's tonic, 1s. 1½d. Although we are still awaiting the publishing of a uniform price-list for the county, the following is a rough list cigarettes, 2s. 6d.; Keen's corn and cold cure, 9d.; Kutnow's powder, 3s.; Lockyer's hair-restorer, 1s. 6d.; oatine cream, 1s. 3d.; orileen capsules, 3s.; Owbridge's tonic, 1s. 1½d., 3s.; Napier's syrup, 9d., 1s. 3d.; Paul's ointment, 1s. 3d.; Pazo, 2s. 6d.; Peps, 1s. 3d., 2s. 9d.; Potter's asthma cure, 1s.; Powell's balsam, 1s. 3d.; Phosferine, 1s. 1½d., 2s. 9d., 4s. 6d.; St. Jacob's oil, 1s. 3d.; Sanitas, 6d., 1s.; Scott's emulsion, 1s. 3d., 2s. 6d., 4s. 6d.; Seigel's syrup, 1s. 3d., 2s. 9d.; Singleton's eye-ointment, 2s.; Sloan's liminent, 1s. 2d., 2s. 4d.; Veno's cures, 11½d., 1s. 3d., 3s.; Zam Buk, 1s. 3d., 3s.; Zedex, 1s. 3d.; Zepto, 9d.; Zox powders, 1s. 1½d.; Zerooma, 3s., 5s.

RESERVED OCCUPATIONS.—The Board of Trade has issued RESERVED OCCUPATIONS.—The Board of Trade has issued a supplementary list of reserved occupations. This includes various workers engaged in salt-mines, turpentine and white-spirit distillation, the gypsum-industry, making surgical instruments and appliances, and of furniture and equipment for operating-theatres, adjusting and repairing weighing-machines, the animal-charcoal industry, and refining gold. A note is added that the temporary or permanent exemption of proprietors or managers of businesses will frequently be called for, but in view of the great diversity of circumstances no general recommendations can diversity of circumstances no general recommendations can be made, and such cases must therefore be left to the decision of the local tribunals after consideration of each case on its merits.

### French News.

(From the "C. & D." Paris Correspondent.)

DIRECTORY OF BRITISH TRADERS.—The British Chamber of Commerce, Paris, has published a trade index of exporters and manufacturers in Great Britain, to assist French merchants who desire to trade in British goods and to facilitate the interchange of commerce between the two countries. An alphabetical list is given of the British firms, with the addresses of their agents in France, and this is followed by a classified list of traders. Equivalent tables of weights and measures and a table of the textile duties levied in France are also given. The whole of the matter in the "Trade is in French.

PRO PATRIA.—Assistant-Pharmacist-Major Charles Brachin, who has been killed by a shell at the Front, was head of the toxicological laboratory of the Third Division of the First Colonial Army Corps. Born in 1878 at Arcis-sur-Aube, he entered the Paris School of Pharmacy in 1900, and was house-pharmacist of the Paris Asylums, where he worked under Professor Moureu, who noted his keen intelligence in research and took great interest in his alert collaborator. Taking his diploma in 1904, he qualified two years later as Doctor of Pharmacy with a thesis on "Acetylenic Alcohols," for which the Paris Society of Pharmacy awarded him a prize. At the time of the mobilisation (August 1914) Brachin was keeping

open shop at Montereau.

PERFUME-DISTILLERS, who were really only a cover for spies, are referred to in "La Parfumerie Moderne." These, it is hardly necessary to add, were Germans, and the district in which espionage and the distilling of perfumery oils was so skilfully combined was the French Alps. Positions offering military advantages were first chosen by German agents, and later on the "boches" arrived as innecent distillers of lavender, peppermint, and cypress, which up to that time had been peasant industries. Schimmels and Fritzsche Bros., of Leipzig, and Ernest Karl were the German houses which acted as covers for the spy system. Fritsche Bros, took an extraordinary interest in the military manœuvres in the district in 1912, the members of a house-party at Barrême spending much time in photo-graphing sites and taking copious notes of the district. Both the Schimmels and Fritzsche premises were sequestered after the outbreak of war.

TALMA AS A DEXTIST.—Talma is best known to history as the tragedian-friend of Napoleon, the actor who taught the Man of Destiny how an Emperor should bear himself on the stage of life. His career as a dentist is less generally known, but for that very reason deserves citation. Talma's known, but for that very reason deserves citation. Talma's father, coming to Paris to seek fortune, had commenced life as valet to an English gentleman, while devoting his leisare hours to the study of dentistry. Thus it came about that towards 1774 we find Talma senior established as a dentist at London. Here his son joined him as soon as his studies were terminated, for (it appears from an old as mighlet) the business was a flourishing and lucrative one. as his studies were terminated, for (it appears from an old pamphlet) the business was a flourishing and lucrative one. It was while extracting molars and stopping cavities in London that Talma junior developed that taste for the drama which led him to fame and fortune. He studied the plays of Shakespeare, and determined to become an actor. But, as his means were slight, he was obliged, when he returned to Paris, to cave for a time in the dayst event and the plays to cave for a time in the dayst covery for a time in the d returned to Paris, to serve for a time in the dental surgery of one of his uncles in the Rue Mauconseil. After eighteen months of practice he had apparently gained a sufficient sum to start on the stage, and in 1786 he was admitted to the Royal Dramatic School.

the Royal Dramatic School.

THE FAIRENHEIT THERMOMETER which M. Nodon describes in "Cosmos" must have been one of the earliest made, bearing as it does the inscription "Abrati fecit Mediolani, 1716"—i.e., two years after the German sarant first published his scale of temperatures. Still in excellent working-order, M. Nodon's prized possession is about 18 in, long. It is a spirit thermometer, with a bulb a little over an inch in diameter. The alcohol is almost colourless, but the temperature is still accurately recorded. Above the tube is the inscription "Magnum thermometrum—Academiae Florentinæ," while various figures illustrate the temperatures. "Very 15t" shows a reaper with two nude children; against the word "Temperate" is a man in the tures. "Very Est" shows a reaper with two nude children; against the word "Temperate" is a man in the fields. "Cold" is accompanied by a woman carrying a waternot, and "Very cold" by a fur-elad male figure warming himself at the fire. This right-hand wording is in French. On the left is an Italian equivalent, with similar illustrations reapers a sledge of Bolow is the similar illustrations, reapers, a sledge, etc. Below is the inscription, in imperfect French, "Par la Cadémie, Paris." A harometer (an invention which dates from some fifty years before this handsome instrument was constructed) accompanies the thermometer. This must have been one of the very earliest dual instruments turned out subsequent to the

### Australasian News.

"The Chemist and Druggist" is supplied weekly to all the members of eight Chemists' Societies in Australia and New

### The Commonwealth.

THE IMPORTATION into Australia of Actina appliances is prohibited by notice in the "Gazette."

### New South Wales.

THE MEDICAL PRACTITIONERS' AMENDMENT BILL was amended in the Legislative Council, to make it perfectly clear that if a person is a German or Austrian subject he is barred from registration in New South Wales, no matter what degree he holds. An Englishman or Australian who has obtained a special qualification from a German or an Austrian University, in addition to some British qualifica-tion, will be allowed to be registered.

### New Zealand.

HONEY EXPORTS.—The "New Zealand Gazette" of November 25, 1915, contains copy of an Order in Council, dated November 22, 1915, which has been issued under Section 9 of the Apiaries Amendment Act, 1913, and which introduces regulations providing for the inspection, grading, packing, marking, stamping, branding, and labelling of honey, and prohibiting its exportation from the Dominion otherwise than in accordance with prescribed conditions. The regulations may be seen by British traders interested on application to the Commercial Intelligence Branch of the Board of Trade, 73 Basinghall Street, London, E.C.

### Queensland.

CASTOR-OIL PILLS.—The Queensland Department of Public Health has issued a warning to chemists that they must not make use of misleading descriptions of drugs, such as eastor-oil pills, when no eastor oil is present in them. Unofficial samples of castor-oil pills, taken by an officer of the Department, have been found to contain no castor oil. In event of any such misbranded articles coming officially under the Department's notice in the future, prosecution of the vendor will follow, without further warning.

MEDICINES FOR SOLDIERS .- The following arc the details of the scheme for the supply of medicines and dressings to returned wounded and invalided soldiers which has been approved by the Pharmaceutical Society.

Medicines to be supplied to returned sick and wounded soldiers on the following conditions:—

1. At a price of 25 per cent, on cost of ingredients and containers landed in the chemist's store, together with a dispensing

rangers ranged in the chemists store, together with a dispensing fee of sixpence (6d.) per recipe.

2. In arriving at the charge for any ingredient of a prescription, or for a container, every fraction of a penny shall be reckoned as one penny. Bandages and dressings to be supplied at 25 per cent. on

4. Patient to receive written prescription or order from medical man in each case where medicines or dressings are required.

5. Doctor's order or prescription to be retained by chemist as his vencher. Patient to acknowledge receipt of goods by signing

his voneher. Pat the prescription.

the prescription.

6. Chemist to give patient a copy of the prescription.

7 If "repeat" is necessary, doctor to sign the prescription copy, which then becomes the original copy, and in its turn will be dealt with in accordance with paragraph 5, and a fresh copy given to the patient.

8. Bandages or dressings only to be supplied on written order of doctor. Order to be retained by chemist.

9. Patient to have tree choice of chemist.

10. All vouchers received during the month to be legibly priced by chemist, numbered and attached to account and forwarded to the Staff Officer for Invalids, 1st Military District, Brisbane, before the 5th of the following month.

11. An Advisory Committee, consisting of three chemists, to be appointed to assist the department in checking chemists' accounts.

accounts. 12. Accounts to be paid monthly.

The scheme is expected to form the basis of any future arrangements for National Health insurance.

### South Australia.

NATURA CATSULED Suppositories containing alum and NATURA CAISCLED SUPPOSITORIES containing alim and boric acid or any preparation of the same drugs, under whatever name designated, used for similar purposes, are prohibited from being sold in South Australia. The Central Board of Health is authorised to destroy any of the capsules referred to.

COMMISSIONS FOR PHARMACISTS.—Interest will be aroused by the appointment of Mr. R. O. Fox as Quartermaster in charge of Medical Supplies in South Australia, with rank

of licutenant. His work includes the control of supplies for local base hospitals, so that the appointment will be permanent until these hospitals are disbanded. The work will manent until these hospitals are disbanded. The work will consist mainly in obtaining and distributing medical supplies for hospitals, transports, and other units. This appointment gives hope that the position of the pharmacist is already recognised within the limits that are possible in present conditions.

CHEMICAL RESEARCH DEPARTMENT.—In order that the resources of the State may be pushed to their fullest development, the Government has decided to establish a Department of Chemical Research. At the annual meeting of the Chamber of Manufacturers, at Adelaide, Mr. R. P. Blundell, Minister of Industry, said the war has brought home to them distinctly their dependence in the past upon other nations, who have been allowed to make use of the raw material of the country, which they themselves have hitherto neglected. As an illustration, he mentioned that at the present time there is a shortage of white paint in the State, yet at Port Piric they smelt the lead from Broken Hill, and also prepare the zinc there. By studying the requirements of their themselves the state of and also prepare the zinc tiere. By studying the requirements of their own domestic supplies it would not be a great step before they would be able to export manufactured articles. Chemical research as applied to agriculture has broken down prejudices against doing anything new, and if such benefits have been accomplished in this direction they should be able to demonstrate that by the use of the chemist it is possible to do equally well for industry generally. The Government (he added) hoped to enter into new areas of production for the State, to extend its in-dustrial equipment, and to demonstrate to the world that Australia, and particularly South Australia, is determined that what commerce has done for other people it can do for Australia.

### Victoria.

THE SALE OF ASPIRIN.—A deputation from the Pharmaceutical Society waited on Mr. W. M. Hughes, Prime Minister and Federal Attorncy-General, at the Commonwealth Offices, Melbourne, on November 8, regarding the sale of aspirin. The use of the trade-mark "aspirin" has been granted to Shmith & Nicholas, who, however, are unable to supply the product on account of the difficulty in obtaining the raw products. Chemists who have a stock of aspirin obtained from Germany before the war are unable to sell it under that pame now that the trade-mark rights to sell it under that name now that the trade-mark rights have been granted to Shmith & Nicholas. Mr. Frank Buckhurst told Mr. Hughes that one of Bayer's represen-tatives told him the more licences that were issued the tatives told him the more lieenees that were issued the better pleased he would be, as the name aspirin would in this way be preserved. Mr. Buckhurst suggested that the use of all German names should be prohibited in the interests of the Commonwealth. Mr. D. Rankin put the point that it is illegal to use aspirin which has not been manufactured by Shmith & Nicholas. Mr. J. Matthews, M.P., said that the firm alluded to had been granted a lieenee to get some of their raw material from Germany, a statement which caused Mr. Hughes to say that if that could be proved he would guarantee to cancel the licence the next minute. Mr. Russell Grimwade, B.Sc. (Felton, Grimwade & Co.), suggested that the term salacetic acid should be used instead of aspirin, and gave an outline of Grimwade & Co.), suggested that the term salacetic acid should be used instead of aspirin, and gave an outline of the manufacture. He considered that no protection should be given to the word aspirin, for Imperial reasons. Mr. S. Plowman, F.R.C.S., said it seemed to him useless to grant the sole rights to manufacture aspirin, which was, in fact, a definite ehemical. He urged that all German trade-marks of substances in the British Pharmacopoeia should be permanently suspended. Mr. A. R. Bailey urged that enemy trade-marks should be removed from the trade-mark register. On November 18 Mr. Hughes announced that he had decided to suspend all enemy trade-marks, so as to prevent their use. Manufacturers will, however, be allowed to employ the marks to enable the public to recognise the to employ the marks to enable the public to recognise the old article under the new name. But the articles to which the name is used in this way must be of Australian manufacture. A list of suspended enemy trade-marks is to be published in the "Gazettc."

Seychelles Vanilla.—During 1914 about 10 tons was exported from the Seychelles, being the seventh crop in succession since 1907 that has been below the average of previous years. This is a heavy blow to the vanilla-planters, especially the small moitie-system planters, who have given up planting vanilla in many localities and replaced it by banana-culture. The owners of large estates, on the other hand, have taken up vanilla-plantation on a larger scale since the succession of wetter seasons, and nearly all the previous plantations, which had been destroyed by seven years of drought, have been replaced.

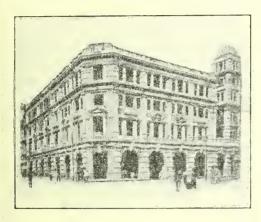
### India and the East.

(From the "C. & D." Correspondents.)

SMUGGLING OPIUM INTO CHINA.—An American subject, H. P. Beeks, was fined \$500 gold in the U.S. Court at Shanghai on December 16 for importing about 16 lb. of opium into Shanghai. He was an old offender.

WOLFRAM.—Everything possible is being done to increase the output of wolfram in the Tavey district, Lower Burma, the Government having succeeded in getting a large supply of labour to work the various wolfram concessions.

New Colombo Premises.—The Colombo Apothecaries' Co., Ltd., of Colombo, Ceylon, has recently moved into fine new premises, a picture of which we give below. These premises were specially erected to accommodate the



COLOMBO APOTHECARIES' CO., LTD.

increasing turnover of the eompany, with which are incorporated the businesses of Smith, Campbell & Co. and Mann & Co. The company has had a successful career since its inception, and as importers of drugs and chemicals from Europe the business is well known. Mr. J. B. Miller, chemist and druggist, is in charge of the dispensing department.

Replacing German Trade.—The Director of Industrics of the United Provinces, in a note on the steps taken since the war to assist local industries, says: "Government has not confined its attention merely to the replacement of German trade; it has devoted itself rather to general assistance of local industries." Among the industries helped are glass-works, the manufacture of biehromate of potash, Epsom salt, hosiery-knitting, oil-pressing, the manufacture of thymol, etc. The possibilities of indigenous dyestuffs have been examined and demonstrations in dyeing given. A central emporium has been established at Cawnpore to act as a store for miscellaneous goods manufactured in the provinces. In scarcely any direction has attention been specially directed to competition with goods formerly imported from Germany, mainly because such goods, generally speaking, could not be made to advantage in the United Provinces.

Japan's Morphine-trade with China.—The Rev. G. S. Muir, Hon. Secretary of the Edinburgh Anti-opium Committee, traces the origin and growth of the traffic in morphine between Japan and China in the "North China Daily News." Many of the details of this trade were given in our issue of October 30, 1915 (p. 50), and Mr. Muir goes over similar ground. He suggests that "those who feel aggrieved by the scandal should write to or menorialise Mr. Runciman, President of the Board of Trade, urging him to restrict the export of British morphia to the East, and especially to Japan, which is now the chief centre of ts conveyance into China." Does it not appear as if the mall body of anti-opium agitators in England who succeeded in depriving China of her Indian opium are to a great extent responsible for this still more deadly evil? Since the war Germany has received a large quantity of pium direct from Turkey—much more than is required for nedicinal purposes. Will this surplus be manufactured into morphine for shipment to the East after the declaration of peace? German makers of cocaine and morphine igorously opposed the Hague Opium Convention.

### Netherlands Notes.

(From the "C. & D." Correspondent.)

A Dutch Fair.—The Society "Nederlandsch Fabrikaat," founded with the object of promoting Dutch industry, has suggested the idea of a Dutch industrial fair on the lines of the Leipzig Fair. It is intended to arrange such a yearly fair in Utrecht.

A Commercial Museum in Batavia.—Suggestions have been made to the Department for Trade and Industry in Batavia for the foundation of a commercial museum in which will be exhibited the products of European industry suitable for importing into the East Indies. Many representatives of European import-houses, however, object to this idea; they fear that the Chinese would thus obtain information which would enable them to trade direct with European firms.

The Patent-medicines Campaign.—The Dutch Society for Combating Quackery has published a booklet of 156 pages, under the title "Quack Medicines: The Substances of which they are Composed, and the Dangers to which People arc Exposed when Using them." The Secretary of the Society (Dr. E. J. Abrahams) has arranged the various proprietary medicines in different groups. The analyses have been made during the last thirty-five years of the Society's existence. The book includes the following groups: Remedies against asthma (20), cough (25), consumption (22), diabetes (9), corpulency (15), rheumatism and gout (38), nervovs discases (22), headache (11), epilepsy (22), electric apparatus against diseases of all kinds (10), dipsomania (11), morphia-habit (3), stomach-diseases (23), constipation (15), remedies against all diseases, which contain laxatives as active principles (39), other panaceas (120), women's diseases (6), hemorrhoids (8), contagious diseases (18), worms (4), remedies for external application (52), remedies for promoting the growth of hair (22), various other medicines (34). The total number of medicines of which the analysis is published is 586. Most of the published analyses of the British Medical Association and of the Public Health Office, Karlsruhe.

Scarcity of several medicaments in Holland, "Moleschott," a popular medical paper, publishes a long article in which are enumerated the important medicaments made in Holland, Twelve manufactories occupy themselves with the preparation of galenical products—namely, in Almelo, Amersfoort, Amsterdam, Dordrecht, Scheveningen, Groningen, Maarssen, Meppel, Schiedam, Sneek, Utrecht, and Zeist. The exportation of proprietary articles made in these manufactories is steadily increasing to the Dutch Colonies, Germany, the British Colonies, and Japan. In three manufactories in Holland (two in Amsterdam and one in Arnhem) surgical dressings of all kinds are made. Cocaine and cocaine salts are made in two Dutch manufactories in Naarden and in Ouder-Amstel. A chemical-pharmaceutical laboratory in The Hague makes ethyl chloride. Chloroform and ether are made at Roermond and also in the quinine-manufactory in Maarssen. Ether is also made at the milk-sugar manufactory in Uitgeest. The cinchonabark that is sold in very large quantities at Amsterdam partly finds its way into two Dutch quinine-manufactories, one of which is established in Maarssen, and the other in Amsterdam. But cinchona-bark is also hought by Dutch manufacturers for the production of galenical preparations, such as cinehona wine, extract, and tincture; the liquid extract is made in large quantities in laboratories at The Hague and Tiel. Essential oils and synthetic perfumes are made in twelve manufactories in Holland, employing about 180 workmen; three of these factories are established in Amsterdam, one each at The Hague, Groningen, Haarlem, Naarden, Nieu vendam, Ouder-Amstel, Zaandam, and two in Roermond. A factory in Naarden applies itself especially to the distillation of caraway oil and to the refining of crude glycerin. One of the Roermond manufactories makes various kinds of artificial musk, which meet with a ready sale in foreign countries, and several synthetic perfumes, such as ionone, geraniol, and linabol. Tooth powders and pastes are made in Holland,

### Legal Reports.

### Trade Law.

The Red Cross.—At Sheffield on January 21, Arthur Carford, general dealer, was fined 40s, for exhibiting the Geneva Cross and using the words "Red Cross" in advertising a disinfectant soap.

Chemical Agent's Claim.—At Newport County Court, before Judge Hill Kelly, on January 20, C. Cablo claimed 32/. 10s. from the Preston Chemical Co. as damages for wrongful dismissal. Mr. F. H. Dauncey stated that plaintiff was engaged by defendants as agent for the salo of a petrol device. When the engagement, was made it was underwas engaged by defendants as agent for the sate of a pettod device. When the engagement was made it was understood that it should be terminable by three months' notice. His Honour found that thirty days would have been a reasonable notice, and plaintiff was entitled to recover thirty days' salary instead of one week's.

thirty days' salary instead of one week's.

Sale of Milk.—The Appeal Court on January 21 quashed a conviction of the Rochdale Justices in the case of Dearden r. Whiteley, wherein a milk-seller was fined for selling milk from which fat had been abstracted. The milk-seller exhibited a notice that all milk sold was more or less diluted, and that no standard was guaranteed. The attention of the purchaser was called to this, but the Justices held that this notice only covered the dilution of the milk, and not the abstraction of fat. The Appeal Court, holding that there was no evidence that fat had been extracted, but that the deficiency in fat was due to the dilution of the milk, of which notice had been given, the sale was not therefore to the prejudice of the purchaser.

Bright Windows.—At Wood Green Police Court on

sale was not therefore to the prejudice of the purchaser.

Bright Windows.—At Wood Green Police Court on January 21, Charles Coulter, chemist and druggist, 89 High Road, Wood Green, was summoned for failing to reduce the intensity of the inside lighting of his shop. The police evidence was that the lights illuminated four shops on the opposite side of the road Defendant said he had done all possible to comply with the lighting restrictions. The bright light thrown across the road was a reflection from the mirrors in his shop, and it was only just sufficient to enable one to read the facias opposite. Witnesses called by Mr. Coulter said the shop was so dark it was difficult to see it at night. The Magistrates expressed the opinion that it was not a serious case, and fined defendant 40s.

A Facettous Chemi t.—At Newport on January 21.

A Facetious Chemi-t.—At Newport on January 21, Benson Harries, chemist and optician, Newport, and a prominent member of the local Pharmacists' Association, prominent member of the local Pharmacits' Association, was ordered to pay 5s, costs, no conviction being recorded, for leaving a box on the footway for 2½ hours, thereby obstructing it. Mr. Russell, who defended, said the defendant was sorry. He was correct in the control of obstructing it. Mr. Russell, who defended, said the defendant was sorry. He was engaged in his shop for some time, and the fact that the box was outside quite escaped his memory. He had no intention of breaking the regulations. P.C. Morris, who proved the case, caused great laughter when he told the Court that the defendant said to him, "You're a marked man. I can see you are a greenhorn." The Chairman: What about the facetious remark? Mr. Russell: I know nothing about that, but Mr. Harries is a very facetious man. The Clerk: Was he dispensing medicine for the police? A person is only allowed to obstruct the street for a reasonable time.

Preum nia of wedicin - On January 24, in the

Pneum nia od wedicin - On January 24, in the West London County Court, Mr. J. F. Hoffguard, a South African merchant, r siding at the Coyal Palace Hotel, Kensington, appeared before Sir W. Lucius Selfe, to answer for his default in payment of a judgment for 18/2 obtained against him by Mr. J. F. Harrington, chemist, 15 High Street, Kensington. In answer to his Honour, beforebut solid the delictors for the supplied to the state of the supplied to the supplied defendant said the debt was for medicine, etc., supplied to defendant said the debt was for medicine, etc., supplied to him while he had a severe attack of pneumonia, and this prevented his attending to business. His Honour: Are you getting any income from South Africa at present? Defendant: No; there is very little doing. His Honour: What offer do you make? Defendant: I cannot make any offer at present. I can pay 2l, now. His Honour: 2l, isn't much off 18l. Plaintiff's Solicitor: I am quite willing to meet defendant with anything reasonable, but we want something definite. His Honour: Pay 2l, now, and the balance at 2l, a month.

Turkey Opium.-Before Mr. Justice Darling, at the Central Criminal Court, London, on January 21, Alfred Lavino (55) and George Benjamin Edward Keun (35), merchants, trading as Lavino, Keun & Co., Fenchurch Street-chants, trading as Lavino, Keun & Co., Fenchurch Street, were indicted for unlawfully "offering" and "proposing" to trade with the enemy in May and June last (see C. & D., December 25, 1915, p. 43). Mr. C. F. Dickens, K.C., appeared for the defendants, who pleaded "Not Guilty." Mr. Travers Humphreys, for the prosecution, said the defendants were Dutch subjects in partnership, trading,

among other things, in opium. On June 20 last year a letter written by the defendants' firm, addressed to a firm at Salonika, asking for quotations for opium of Turkish origin, was stopped by the censor, and as the result an official from the Home Office was appointed to examine the books and documents of the firm. In the course of the correspondence it appeared that the Salonika firm expressed the view that some difficulty might arise in shipping the opium, whereupon it was suggested that the opium pressed the view that some dimenty might arise in simpping the opium, whereupon it was suggested that the opium might be shipped viâ Marseilles and Port Said to Japan. Since this country had been at war with Turkey it had been made an offence, under the Trading with the Enemy Act, for any persons in this country to deal in opium coming from Turkey. There was no actual trading with the enemy, but it was alleged the correspondence contained an offer. Act, for any persons in this country to deal in opium coming from Turkey. There was no actual trading with the enemy, but, it was alleged, the correspondence contained an offer or proposal to trade in enemy goods. Mr. F. E. Annison gave evidence that the defendant firm bore the highest reputation. Mr. Lavino also gave ovidence. Mr. Dickens, K.C., argued that there was no "proposal" to trade with the enemy within the meaning of the Act; the letters were merely inquiries, and, in these circumstances, the prosecution faile l. The jury acquitted both defendants.

Substituted Pills for Beecham's.—In the Marylebone Country Court before Sir Wm. Lucius Selfe on January 21,

Substituted Pills for Beecham's.—In the Marylebone County Court, before Sir Wm. Lucius Selfe on January 21, Sir Joseph Beecham, Bart. (trading as Thomas Beecham), applied for damages and an injunction. His particulars of claim alleged that on January 11 last the defendant, Mr. Lloyd Davies, a chemist, carrying on business at 63 Golborne Road, Kensington, had wrongfully supplied spurious pills not of the plaintiff's manufacture when such pills were demanded, and that no information was given to the purchaser that the pills were other than as demanded. Application was for an interim injunction to restrain the defendant from supplying in his business pills not of the plaintiff. the purchaser that the pills were other than as demanded. Application was for an interim injunction to restrain the defendant from supplying in his business pills not of the plaintiff's manufacture when Beecham's pills were demanded until the day after the day' on which the action should be tried, or until further order. Damages were claimed to the amount of 15t. Mr. G. W. H. Jones (instructed by Murgetts & Jenkins) appeared for the plaintiff, while Mr. F. Freke Palmer had charge of the case for the defence. Mr. J. A. Lockwood, travelling inspector for Messrs. Beecham, was in attendance. Upon the case being called, Mr. Jones said that since proceedings were commenced the parties had met, and the defendant, admitting all the allegations made against him, was willing (subject to the Judge's approval) to consent to a perpetual injunction in the following terms: "It is judged and ordered that Lloyd' Davies, the defendant in this action, his servants, and agents are strictly enjoined and perpetually restrained from supplying in his business any pills not of the plaintiff's manufacture when Beecham's pills are demanded." Mr. Jones said the plaintiff was quite content with this order, and, subject to the Judge's approval, it would dispose of the entire action. In reply to a question from the Judge, he added that the plaintiff had not asked for or received any damages from the defendant; he had only taken the costs. An injunction was granted in the terms asked.

Other framer Case.—In the City of London Court on Lanuary 20 hefers Sir Lohn Paget Bart & C. Denuty.

An injunction was granted in the terms asked.

Oil-of-Lemon Case.—In the City of London Court on January 20, before Sir John Paget, Bart., K.C., Deputy-Judge, Felice Bonaventura & Co., oil-importers, 98 Great Tower Street, E.C., sued John Knill & Co., wharfingers, Fresh Wharf, Lower Thames Street, E.C., for 121., value of 20 lb. of oil of lemon at 12s. per lb. lost while in defendants' possession out of a consignment ex s.s. Crane on March 24, 1914, owing to the defendants' negligence as wharfingers. Mr. Austin Farleigh (instructed by Smith & Hudson) appeared for the plaintiffs, and Mr. Simey for the defendants. Mr. Farleigh said that the plaintiffs were importers of essential oils from Sicily and among them was oil of lemon. The oil, together with other oils, was sent by the plaintiffs from Messina on February 23, 1914, and it was landed here on March 21. On March 24 the oil went into the defendants' possession as wharfingers. Defendants delivered to the plaintiffs a landing account which clearly showed that the whole of the cases containing the oil were carefully weighed and examined. There were twenty-saven eases of oil. On October 13, 1915, defendants wenty-saven eases of oil. On October 13, 1915, defendants the oil were carefully weighed and examined. There were twenty-seven cases of oil. On October 13, 1915, defendants twenty-seven cases of oil. On October 13, 1915, defendants wrote and said they had been turning over the plaintiffs parcel, and they had discovered that one of the cases was leaking. It was then 20 lb, short of oil. The leakage, they said, had been caused through the jar having a small crack in its base. Each case contained two jars, and they were made of copper. There was about 25 lb. of oil in each jar. Counsel referred to the properties of lemon oil, stating that on October 14 plaintiffs wrote and said they were surprised to hear that the oil was leaking, and that they failed to see how it was due to bad packing. If their remark had come on landing they could have understood it. The Deputy-Judge: Why were they so long in their hands? Mr. Deputy-Judge: Why were they so long in their hands? Mr-Farleigh: Market prices had gone down. We decided to keep the oil there. The defendants wrote and said no

responsibility rested on them, as there was no appearance of the contents being out of condition when the goods were handed to them. Defendants further said that the goods had not been moved until October 1915, when it was found they were stained and of light weight. Mr. Bonaventura was called, and said that he had been dealing in cssential was called, and said that he had been dealing in cssential oils for fourteen years, and that the average time for carriage of oil from Messina to London was three weeks. There was a strong smell from oil of lemon and it evaporated quickly. It was a volatile oil and it left a stain. Horner & Sons, Tower Hill, had inspected the oil on his behalf. Copper jars were very strong and very stiff. Harry Westbrook, employed by Horner & Sons, also gave evidence as to the leakage of the oil. Mr. Simey submitted that there was no case against the defendants. Bailees were only liable in the case of negligence, and none had been established against the defendants. The Denuty-Judge been established against the defendants. The Deputy-Judge disagreed and thought res ipsa loquitur applied. Bearman, defendants' superintendent, said he received the oil in dispute. It was stored in the usual way. It never had a dispute. It was stored in the usual way. It never had a fall. The damage could not have occurred while the oil was on their premiscs. As the crack in the jar got bigger the leakage would be greater. The goods were insufficiently packed. After other evidence the Deputy-Judge said he packed. After other evidence the Deputy-Judge said he must find for the defendants, as he found they were not guilty of any negligence, without which plaintiffs could not succeed. The onus of proving it was on the plaintiffs, and they had not done it. Mr. Farleigh urged that in law the onus was not on the plaintiffs. The Deputy-Judge: I find no negligence in the defendants, with costs. Mr. Farleigh asked for leave to appeal, but it was refused.

### High Court Cases.

Unless when otherwise stated these cases have been heard in the High Court of Justice, London.

PETITION BY CHEMISTS.

In the Winding-up Court on Tuesday, January 25, Mr. Justice Neville allowed the petition of Duncan, Flockhart & Co. for the compulsory liquidation of the British Mer-cantile and Trading Co., Ltd., to stand over for three months, Mr. Dighton Pollock stating that the adjournment was on terms arranged between the parties.

A SULPHATE-OF-AMMONIA CONTRACT.

In the King's Bench Division on Friday, January 21, before Mr. Justice Bailhache, an action was brought by Mitsui & Co., Japanese merchants, Lime Street, London, against Watts, Watts & Co., Ltd., of London and Cardiff, to recover damages against the defendants for alleged breach by them of a charter poster of Lunc 5, 1014, in recover

to recover damages against the defendants for alleged breach by them of a charter-party of June 5, 1914, in regard to the carriage of 3,500 tons of sulphate of ammonia. Mr. Leslie Scott, K.C., and Mr. Wright appeared for the plaintiffs, and the defendants were represented by Mr. Leck, K.C., and Mr. Raeburn.

The case for the plaintiffs was that they contracted with the defendants under the charter-party for the defendants to send a ship to the port of Marionpol, in the Sea of Azov, in September 1914, and there load the carge of 3,500 tons of sulphate of ammonia and carry it to a port in Japan. The steamer was to be ready to load by September 20, and if it was not so ready the slexified. A20V, in September 1914, and there load the cargo of 3,500 tons of sulphate of ammonia and carry it to a port in Japan. The steamer was to be ready to load by September 20, and if it was not so ready the plaintiffs had the option of cancelling. The plaintiffs had bought the ammonia from the Belgian firm of Evance, Coppée & Co. The freight rate under the charter-party was 20s. per ton. The defendants failed to send the steamer, setting up the war as justifying their action. The firm of Evance, Coppée & Co. claimed against the plaintiffs compensation for non-acceptance, as the plaintiffs could not get another ship, the freight rates being prohibitive—something like 60s. per ton. The sellers asked for 9,000l., and plaintiffs compromised the claim at 4,500l. and certain costs.

Mr. Leslie Scott said his clients held the defendants responsible for the breach of the charter-party, and they claimed the 4,500l. they had had to pay to the sellers, and a sum of 3,811l. that they estimated they would have made as profit if the goods had in the ordinary way reached Japan.

The defence set up by the defendants was that by reason of the practical seizure of cargoes by the Turkish Governparticipate in the European War, and that Turkey would participate in the European War, and that the Dardanelles would be closed, they were fully justified in not sending the steamer to Marionpol by virtue of the clause in the charterparty that provided exceptions as to "arrests and restraint of princes."

party that provided exceptions of princes."

Mr. Leslie Scott, K.C., dealing with this defence, argued that it was not sound, as an apprehension of future restraint was not in fact prevention by restraint.

Mr. Mokai, manager of the London branch of the plaintiff firm, was called to prove the facts of the case, and he

said that if the delivery had been effected at Japan their profit would have been 1l. 1s. 9d. per ton, making the total profit that they had lost 3,811l. 8s. 7d. They had to pay 4,500l. to their sellers and certain costs.

Mr. Leck, K.C., for the defendants, said that, assuming the ship was at Marienpol on September 20 to load, the loading would take seven or nine days, and then it would take three to four days to reach the Dardanelles. The Dardanelles were, in fact, closed between September 26 and 27. The Dardanelles were closed before the ship could have left the Black Sea. The contract could not be performed. The defendants had to judge of the position that was The defendants had to judge of the position that was created by the war, and they took the risk of being right or wrong when they decided not to send the steamer; and as events turned out the contract could not have been fulfilled.

Eventually the case was adjourned till Thursday,

January 27.

### New Companies

and Company News.

P.C. means Private Company and R.O. Registered Office.

Tollet Table Articles, Ltd. (P.C.).—Capital 10,000%, in 11. shares. Objects: To carry on the business of manufacturers of and dealers in brushes and toilet-articles of all kinds. W. B. Hinde is permanent governing director. Solicitor: J. Hargreave, 37 Waterloo Street, Birmingham.

MARGANDS, LTD. (P.C.).—Capital 500l. Objects: To take over and carry on the business of dentistry carried on by A. Margand at 11 Gloucester Place, Brighton, as "Messrs. Margand." The subscribers and first directors are A. Margand and E. H. Poolc.

LYNN PROOFING CO., LTD. (P.C.).—Registered in Edinburgh. Capital 3,000*l* in 1*l*, shares. Objects: To carry on the business indicated by the title and that of merchants, manufacturers, chemical manufacturers, dyers, bleachers, etc. The first subscribers are R. Stewart and J. S. Gillies, Glasgow.

HADYN MAXWELL & Co., LTD. (P.C.).—Capital 6007. Objects: To take over the business of Hadyn & Maxwell, mineral-water manufacturers, carried on by H. H. Bradford and C. M. Bradford at 5 Back Church Street, Manningham, Bradford. A. II. Bradford, C. M. Bradford, and J. E. Nicholas are the first directors.

Synthetics, Ltd. (P.C.).—Capital 4001. Objects: To take SYNTHETICS, LTD. (P.C.).—Capital 4007. Objects: To take over certain secret processes for the manufacture of synthetic substitutes for chicory, milk, and other articles of food and nutriment, and to adopt an agreement with Heinrich Kupper, Urbrich Hugentabler, and Jean Jacques Bloch. C. Nicholas, Heinrich Kupper (a Swiss subject), and F. H. Shoosmith are the first directors. R.O., 19 Hanswer Schare. over Square, W.

Felton & Crepin, Ltd. (P.C.).—Capital 2501., in 11. shares. Objects: To carry on the business of general merchants and Objects: To carry on the business of general merchants and manufacturers, factors of, agents for, and dealers in goods, materials, and produce, importers, exporters, refrigerators, shipowners, etc., chemists, druggists, drysalters, oil and colour men, makers of and dealers in essences and essential oils and perfumes, proprietary and fancy articles, etc. R.O., 15 Cooper's Row, Tower Royal, London, E.C.

Walford & Co., Ltd. (P.C.).—Capital 5,000t., in 1t. shares (1,000 founders' preference). Objects: To carry on the business of chemical-manufacturers, drysalters, and distillers of fruit-essences and essential oils and other products, dealers in colours, malt extracts and malt flours, and all kind of salts, aeids, alkalies, drugs, chemicals and chemical-products, etc., and to adopt an agreement between A. P. Brooks (trustee for the company) and S. M. Walford, R. H. Isherwood, and W. C. Freeman, R.O., 63-65 St. Oswald Street, Rochdale Road, Manchester.

R. Graesser, Ltd. (P.C.).—Capital 50,000l., in 1l. shares. Objects: To adopt an agreement with N. II. Graesser for the acquisition of the business carried on by him at Acrefair, near Ruabon, Denbigh, as "R. Graesser," and to carry on the business of manufacturing chemists, carbolic-acid manufacturors microcacid means observed and grant of the carry of the carbon o acid manufacturers, picric-acid makers, coke tar and gas producers, refiners of tar-products, manufacturers of ex-plosives, pharmaceutical and fine chemicals, essences, dyes and intermediate products, refiners of vegetable and mineral oils and manufacturers of any products therefrom, metal-refiners, preparers of alloys, engineers, consultant chemists, etc. R.O., Ccfn, near Ruabon, North Wales.

LIEBIG'S EXTRACT OF MEAT CO., LTD.—The directors announce an interim dividend of 10 per cent., free of income-tax, on the ordinary shares.

THOMPSON & CAPPER, Ltd.—Mr. Arnold Collinson has been elected to the board of directors. Mr. Collinson was apprenticed twenty-five years ago to the original firm, and became successively assistant, manager, head manager, and, when the limited company was formed, general

JOSEPH CROSFIELD & SONS, LTD.—The report states that of the balance of profit after payment of dividends on the preference and ordinary capital the directors have placed the sum of 20,000l. to general reserve (increasing it to 191,750l.), and have applied 20,000l. for depreciation, leaving 10,114l. to be carried forward.

AMERICAN CROWN AND BRIDGE PLATELESS TEETH PARLORS, LTD.—On the petition of Mrs. Fellows, a judgment creditor, Mr. Justice Neville in the Companies' Court, London, on Tuesday, January 25, made an order for the compulsory winding-up of the American Crown and Bridge Plateless Teeth Parlors, Ltd., which carried on the business of manufacturing and fitting artificial teeth.

manutacturing and litting artificial teeth.

PARKE'S DRIG-STORES.—The report for the year ended September 30 last states that the net balance of profit (after allocating 4581, for depreciation of leases, 3861, for repairs and renewals, 4181, for fixture-depreciation and reserve, and 4501, for stock-reserve) is 4,5951. The directors recommend a dividend of 4 per cent. (less income-tax) on the ordinary shares, carrying forward 8571, and leaving the reserve funds at 15,8171.

G. B. Kent & Sons, Ltd.—The report for the year which ended on September 30, 1915, states that, after allowing for bad and doubtful debts, depreciation, etc., there is a balance of profit of 15,373*L*, to which have to be added the balance brought forward and transfer-fees. On the other hand, brought forward and transfer-fees. On the other hand, there are to be deducted interest on mortgages and loans, income-tax, and directors' fees, also interim dividend on the preference shares duly paid, leaving a balance of 11,341. for distribution. The sales were a record in the 138 years of the business, and those for the past quarter show a still further increase. The board has invested 1,000. in new War Loan and have paid the usual half-yearly dividend on the preference shares, placed 500. to reserve, written down goodwill, etc., by 585. to 33,000., and after paying the life directors' fees (2,100), recommend a dividend of 6 per cent. on the ordinary shares, leaving 2,639. to be carried forward. forward.

### Bankruptcy Report.

Re Reginald Leonard Brunsden, 268 Oxford Road. Re Reginald Leonard Brunsden, 268 Oxford Road, Reading.—The first meeting of creditors of this debtor (trading as a druggist) herein was held at 172 Friar Street, Reading, on January 20, when the statement of affairs showed liabilities amounting to 2801. 2s. 4d., and assets valued at 841. 6s., the estate disclosing a deficiency of 1951. 16s. 4d. It appeared that the debtor commenced trading as a druggist in October 1910, having previously assisted his father. He had saved about 501., and that, together with a sum of 301. borrowed from a relative, constituted his initial capital. Debtor has since repaid the 301. The business has shown a profit of 21 and 31. a week from the commencement, but debtor had gradually got into 301. The business has shown a profit of 21, and 31, a week from the commencement, but debtor had gradually got into arrear with the wholesale firms, whose claims now constitute the principal part of his indebtedness. Proceedings were commenced against the debtor by a wholesale firm in November last, and execution was levied against him in the following month, which was the immediate cause of filing his petition. The only book of account kept by the debtor was a cash-takings book. Debtor had a banking account, but his takings have not all been paid into it. The failure was due to loss of a sum of 351, payment of fines amounting to 101, 10s, for selling drugs containing unauthorised percentage of poisons, expense of upkeep and depreciation of motor-cycles. Debtor stated that he was aware that he had not sufficient property to pay his debts in full twelve months ago. The case was a summary one, and was therefore left with the Official Receiver.

### Gazette.

### Partnerships Dissolved.

CARTER, G. W., and HOLLAND, H. M., Keighley, veterinary surgeons, under the style of Carter & Holland.

LYNES, J., and TOWNROE, E. D., 43 Campden House Court and 2 Argyll Road, Kensington, general medical practi-tioners, under the style of Lynes & Townroe.

MOORE, C. J., and MURPHY, J. W., Connaught House, Markhouse Road, Walthamstow, surgeons and physicians, under the style of Drs. Moore & Murphy. WIGGINS, H., and BROWN, H. S., Worthing, physicians and surgeons, under the style of Wiggins & Brown.

WILLIAMS, G. H., and RICHMOND, J. W., Burslem and Tunstall, physicians and surgeons, under the style of Williams & Dishuration.

Williams & Richmond.

### Naturalisation.

The "London Gazette" of January 21 contains a number of regulations made by the Secretary for India under the British Nationality and Status of Aliens Act, 1914. Among these regulations are forms of certificates of naturalisation which may be used in different circumstances. A form is supplied for use in cases where the nationality of an applicant for naturalisation is in doubt, and also where the applicant is a minor.

### Joint-stock Companies.

Notice is given in the "London Gazette," January 21, Notice is given in the "London Gazette," January 21, that, pursuant to Section 242 (5) of the Companies (Consolidation) Act, 1908, the names of the undermentioned companies have been struck off the Register, such companies thus being dissolved: American Dental and Drug-stores Co., Ltd.; Aperghis Ointment, Ltd.; Bonells (Cash Chemists), Ltd.; Bosustow's Drug-stores, Ltd.; China Hospital Association, Ltd.; City Optical Co., Ltd.; Compagnie des Eaux Minérales de l'Artois, Ltd.; Industrial Oxygen Syndicate, Ltd.; La Physiatrie Etablissements de Médication Naturelle Co., Ltd.; Ozo-Kuer, Ltd.; Radium Mines (Joachimsthal), Ltd.; Reigate Fuller's Earth Co., Ltd.; and Slack's Chemists' System, Ltd. Chemists' System, Ltd.



Postal Address:

C. & D. INFORMATION DEPARTMENT, 42 Cannon Street, London, E.C. Telegraphic Address: "CHEMICUS, CANNON, LONDON" (two words). Telephone Number: 3617 CENTRAL (three lines).

### INFORMATION WANTED,

Postal or telephone information with respect to makers or firsthand suppliers of the undermentioned articles will be appreciated. Please address us as above:

" Eureka " 106/71. brush. of fitted manicure cases 99/51. "Pesterine" disinfec-

tant. 110/68. Zucker's carbonic baths:

supplies.

96/70. 'Oxygal' granules. 112/3. Robertson's capsules Bland No. 2, with arsenic. 107/7. 'Blue Cross' Eau de

107/7. Blue Closs Cologne. 100/67/68. Boldoot's Eau Cologne: London agents. 112/5. "Sals Maggiore." Eau de

### INFORMATION SUPPLIED.

Inquiries regarding the following articles have been answered. The information as to supply will be given to others who send a stamped, addressed envelope to the Information Department, The Chemist and Druggist, 42 Cannon Street, London, E.C.:

July 13 Breat American specific, 110/55
Boraeic-acid powder, 106/66
Cassell's, Dr., tablets, 109/62
Copper sulphate, 105/64
Ear-plugs, 106/17
"Enesol," 106/62
"Ferrovim," 110/42
"Hearing apparatus, 107/8
"Kma Pina," 109/51
"Laxatines," 107/6
"Master" brand ice-bag, 106/55
Newsone's cordial, 90/25
"Niakigin," 107/5
Olival Malaga soap, 108/56
Papier-maché containers, 106/27
Potassium sodium tartrate, 105/64 105/64

Baker's great American specific, 110/55
Boracic-acid powder, 106/66
Boracic-acid powder, 106/66
Respirators (helmet-shaped), Respirators 105/26

Silver leaf, 105/12
"Souchets," 109/57
"Spirone" spray and inhalant, 105/54 Tooth-brushes (French makers),

110/29
Van Vleck's specialities, 101/60
'Vellskyn' toilet specialities, 108/42

Velvey ''
110/37 dressing-combs,

Vint's menthol cones, 108/21 Whytwarth fountain pen, 108/60 "Zyba" balnı, 101/62

### APPRECIATIONS.

From a Firm of Chemists in the Midlands:

"The address you gave us proved very beneficial. Please accept our thanks for your trouble."—(91/71.)

### Observations and Reflections.

By Xrayser II.

### Your Damaging Criticism

of the Pharmaceutical Society's checking scheme leaves little to be said, but there is still one point that has not been noted. The Society is setting up an expensive machine without any guarantee that the work it is to do will be permanent. It seems, indeed, to be committing itself to the continuance of Insurance work under its own auspices, but it cannot commit its members, though possibly this may be its object. We have accepted the new Medical Benefit Regulations tentatively only; unless we are radically insincere in our protestations our continued acceptance of them depends on circumstances which cannot yet be foreseen. Already an appreciable number of pharmacists have retired from the panels; it is practically certain that many more will follow them if July brings no settlement of our grievances; and it is at least conceivable that at the end of the year the whole situation will be revolutionised. Surely this is no time for setting up new vested interests n things as they are. The time is one of transition, and it is folly to act as if it were one of assured per-

### Some Sort of Check

is undoubtedly needed on such pricing s we may expect from young girls with no pharmaeutical experience and very indifferent general educa-Even well-educated people can make little or othing out of an ordinarily well-written prescription, nd such "a d cramped piece of penmanship" as any scripts present would puzzle anybody but an pert. A few days since one was submitted to me cause I was known to be familiar with the doctor's riting; had I not been so I could not have decided which the various readings was correct. But since our prent position is tentative, and likely to prove temporary ly, some temporary arrangement, even if it had been a makeshift order, would have been better than such elaborate and expensive one as is being sct up. It ilike building a scaffold to outlast a house.

### ie Liverpool Chemists' Association

is, I believe, with two epitions, the oldest local institution of the kind in Igland. Colchester, itself one of the most ancient of cities, the reputed birthplace of the Empress Helena, where of Constautine, boasts the earliest of them all, the Colchester Association of Chemists and Druggists, fended in 1841. Birmingham, or, as De Quincey prefeted to spell the name, Brummagem (it occurs in Caden as Bremicham and Brimingham) comes next, its Pharmaceutical Association, founded in 1847. The great but prejudiced writer whom I have just menticed might have set it down to the "conceit" of this asking town that it chose this high-flying title for its Chmists' Society, but there is an older precedent. The first Association to have called itself Pharmace ical is that of Aberdeen, which dates from 1839, two we's before the foundation of the Pharmaceutical Society its f. We are not forbidden to believe that "promotic cometh from" the North, and it appears to be from the quarter that we derive this dignified appellation. Not in date of our local Societies is that of Liverpool, when, with a modesty characteristic of the place, chose thoumbler title by which it is still known, and it is in lyance of these three by having been in continuous acte work since 1849 Liverpool, indeed, hit the happy me um, dropping the lowly "druggist," but not assuming he pharmaceutist. It was very shortly after this

that my own schooling in the town began, and my first memories of the trade are bound up with gossip about the Association and its members.

### Rheumatoid Arthritis

is one of those delightfully vague phrases which, like charity, are made to cover a multitude of diagnostic sins and therapcutic failures. Whenever a medical man is faced by an arthritic condition of the joints, incurable by all the ordinary means, he labels the disease rheumatoid arthritis, and tells his patient that he or she must be content to be a perpetual invalid. Dr. Rowlands now tells us, as some others have done before him, that the disease is amenable to vaccine-therapy, which will lead to the destruction of those organisms which produce the toxins that cause all the trouble. If doctors were agreed as to this course we might hope for some progress in the treatment of rheumatoid arthritis, but unfortunately they are not. One of the principal authorities on the subject, who got a hospital specially built for its investigation, laughs the vaccine theory to scorn, and he has a large following, so that we are not likely to see, for some time to come, any definite concerted effort along the lines desired by Dr. Rowlands.

### One Weak Point

in the vaccine theory is that so few men are agreed as to the organism producing rheumatic and arthritic trouble. There are a few outstanding men who believe whole-heartedly in the existence of a special organism, and one at least of these is said to prepare the autogenous vaccines desired by Dr. Rowlands. But these vaccines cost money, and it has to be remembered that rheumatoid arthritis is the luxury of the rich and the daily portion of the poor. And how many of these latter can afford, in addition to vaccines, "removal to a bracing climate, massage, baths, tonics, and removal of sources of worry"? If the therapeutic treatment of the disease along these lines is to be a success, our great Mother, the State, must so adapt her Insurance Acts that vaccine treatment will be encouraged and not, as at present, be made practically unavailable to the masses of the insured. It is for this sort of "research" that our Committees ought to be appointed and paid. A very small fraction of the annual grant would support a State laboratory where vaccines could be prepared at a fee that could be met by a working man, even if it were not altogether free. By the way, Dr. Rowlands seems to have omitted the greatest cause of toxin poisoning, constipation, which is the infallible precursor of rheumatism, lumbago, sciatica, and ultimately of arthritis, as well as numerous other troubles.

### The Export of Cocoa

to Holland and Scandinavia has been a familiar headline in our newspapers of late, and I observe that you propose to overcome the difficulty by rationing imports to all neutral countries on a three-years' pre-war average. But few people seem to realise that it is raw cocoa that is being exported, and there is no evidence that the neutral countries-at least Hollandare buying more raw cocoa than they did before the war. Previous to August 1914 the chief importing centre of raw cocoa was Hamburg, whence distribution was made to all other countries. Hamburg can no longer import raw cocoa, and it stands to reason that Holland, a great cocoa country, must get its raw cocoa somewhere. It is perfectly true that there may be individual traders in neutral countries who re-export cocoa to Germany, but it remains to be proved that neutral Governments are deliberately encouraging such re-export. For my part it seems to be a very open question whether the securing of the raw cocoa business for London with a view to its continuance after the war is not an object to be encouraged, even if in the meantime some cocoa finds its way to Germany.

### AN OPPORTUNITY!

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LIBERAL TERMS TO THE TRADE, and SPECIAL TERMS for WINDOW and COUNTER DISPLAY, showing 100 per cent. PROFIT.

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January 1916.

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# Editorial Articles.

### Tightening the Grip.

In accordance with the Government policy of checking German trade aggression, to which we have referred several times lately, the Trading with the Enemy (Amendment) (No. 2) Bill has been introduced in the House of Commons. The Solicitor-General (Sir George Cave) on January 21, in moving the second reading, explained that the Bill is designed to deal with registered companies having a large number of enemy shareholders. These companies may already be controlled by supervisors appointed by the Board of Trade under existing powers, so that the profits cannot be paid to enemy shareholders. The fact remains, however, that these businesses may still be carried on in this country, thus maintaining the goodwill and accumulating profits which may be used to the detriment of this country in the cconomic war which it is foreshadowed will take place on the conclusion of peace. Sir George alluded to the extraordinary protection given to enemies under the Companies Act, by which German subjects registered as a limited company enjoy the protection of British laws and trading facilities. This it is proposed to remedy by entrusting the Board of Trade with discretionary power to prohibit the carrying-on of business by enemies or to wind-up any of the companies owned by enemies. The assets are to be applied in the first instance for the benefit of British creditors and shareholders, the surplus being deposited with the custodian of enemy property, who will keep the money until such time as it can be ascertained how British property in According to inenemy countries has been treated. formation at present available it appears that British property in Germany is being treated in a very highhanded way, so that, failing adequate compensation to British subjects whose property has been confiscated, the fund accumulating in this country from the assets of alien enemies will be employed for this purpose, and on this account the money will not be released immediately Power is also given to on the conclusion of peace. British companies to purge themselves of enemy share holders, the sale money of such shares being deposited with the custodian of enemy property. The Bill also makes it possible to grant patents in which an enemy is interested to the custodian, who will be empowered to grant licences to deal with these patents in the prope way, so that they can be used by British manufac turers. The discussion which followed the introduction of the Bill showed that it is regarded as a necessar, piece of legislation. Doubt was expressed as to th intention of the Board of Trade to act with vigou under the provisions of the Bill, but the Under-Secre tary of the Board of Trade gave an assurance the everything possible will be done to get rid of the Ge man element in British trade. The Bill will be we comed as an indication that no further leniency is to l shown by the Government to alien enemy property.

### Insurance-script Pricing.

Among the remarkably varied contents of this issue none is of greater interest to dispensing chemists at home than the illustrated description of the Scottish Bureau for pricing Insurance prescriptions. With the origin of this establishment dispensing chemists in Scotland are familiar, for they may truly be regarded as its originators, and they cleverly carried the Commissioners and Insurance Committees with them. The latter were not unanimous in the first instance; indeed, their opposition to the Bureau was such that a case against it was carried to the Court of Session, Edinburgh, where it was lost, and since then the Bureau has been accepted with favour by all the Insurance Committees in Scotland. Our account of the work done in the Bureau is general and sufficiently full to show how prescriptions are priced and accounts rendered. The Bureau started with a great deal of work kehind it; this is being steadily worked off, and eventually the staff will have worked off the old scripts, so that it will only have to face the prescriptions due to come to it month by month. It will be observed that the Bureau has a more efficient staff than is generally contemplated for pricing bureaus in England, but the present position in England is not yet clear, for in certain cases the persons responsible for the bureaus have insisted upon a higher standard of qualification than the Commissioners started with; and, unhappily, the Pharmaceutical Society appears to have lent itself to the Commissioners in this matter, thus having its name associated with a lower class of service than has hitherto been recognised. This matter will have to be closely watched. We have practically entered upon a very large undertaking, and the Pharmaceutical Society, as representing dispensing chemists, should be prepared to champion them, but there is no evidence that they can do this now. On the contrary, we know that the Society has entered the scheme in a way that means imperfect pricing by the bureaus—the very thing that the Scottish Bureau has excluded. Panel chemists in England and Wales must keep a close watch on this business and endeavour to find out who is working for them.

### Industrial Alcohol.

THE curtailing of the hours of the sale and consumption of intoxicating liquors does not appear to have had much effect, if any, on the amount of spirits consumed by the public as a beverage, especially in the North, and this in spite of the rising values of whisky. We are informed that the consumption has been even greater in certain districts, and suggestions are being put forward in the way of restricting supplies. The effect of the Government demands for strong spirit (about 66 o.p.) for use in connection with the manufacture of high explosives is, however, likely to make the supply of grain whisky more precarious during the course of this year. This matter is dealt with in the "Wine Trade Review," in which it is stated that the Government demand was first confined to the London and other distilleries which had been in the habit of supplying spirits for industrial purposes, but as time went on part of the requirements had to be met from the Scottish and other distilleries which had previously been entirely engaged on the production of potable pirits, particularly when the operations of the London listilleries were interfered with by the non-arrival of he necessary supplies of molasses from the West Indies. At the same time the demands of the explosive-manuacturers continued to grow at a very rapid rate, and it

is estimated that they alone have already been supplied with five million gallons. So acute is the shortage that at the end of December one large distilling company cancelled many of their orders for regular customers simply because of the heavy demand for industrial purposes. We intimated in our issue of January 15 that the Government virtually controlled the supplies of spirit. In fact, we understand that the Covernment has recently investigated the capacity of each distillery, and has taken steps to assume a measure of direct control over their operations. It is estimated that during the current year the Government will approximately require twenty million gallons of spirit, and this will mean so much less for whisky-blending. Several weeks ago the stocks of methylated spirit in the methylators' hands were taken over by the Government, and since then only restricted quantities have been available for delivery even to regular customers. Meanwhile every effort is being made to accelerate production, but even previous to the war the distilleries were producing at top-notch capacity in order to supply the normal demand. This new demand is, of course, much less profitable to distillers, as the price paid for this industrial spirit shows a much smaller margin of profit than that paid by whisky-bonders.

### The Linseed-oil Boom.

In dealing with the position of this product in our issue of September 18 (p. 56) we pointed out that all indications were towards a shrinkage of supplies and the establishment of higher prices during the current year. opinion still holds good in spite of the enormous rise which has since taken place. The rapidity of the advance during the last few weeks has been sensational, and altogether unprecedented. Fears of a famine and the huge advance in freights have had a good deal to do with this rise. At this period last year the market was rising smartly to well within the "twenties" on the brisk export demand for the Continent, especially Holland, and it was not until the spring that the demand was checked as the result of the prohibition of exports to Holland, a large proportion of which, as was gathered from the Dutch statistics, found its way to Germany. In the course of November last the price moved well into the "thirties," eventually reaching 41l. 15s. per ton towards the end of December, and closing the year only about 1l. per ton below that figure. Since then there has been a swift advance to about 45%, while it is significant that a substantial and steadily widening premium has been established on forward deliveries, thus indicating that a period of serious scarcity is apprehended. As a matter of fact, scarcity on the spot already looks like becoming acute in face of a very brisk inquiry from consumers, who are, moreover, placing contracts ahead rather freely in view of the extremely limited supply of seed and the fact that the reserve of oil is already dangerously reduced. The near future still presents possibilities of a further considerable rise, as crushers are not only hampered in their operations by a scarcity of labour, but find great difficulty in covering their needs in raw material. This is unlikely to be remedied for a few months, at any rate, as there are now serious obstacles to be contended with as regards freightage, this being the chief reason why shipments from India have been so reduced for some time past. This wholesale requisitioning of vessels now applies to the River Plate, where, moreover, keen competition is likely to be experienced in connection with the shipment of wheat and other cereals. It is probable, therefore,

that no great weight of supplies will reach this side from that quarter until towards the end of March, and the outlook is thus anything but reassuring for the crushing industry, whose operations in other oilseeds are likewise much hindered by actual scarcity of raw material. The virtual absence of Russian supplies since the war started is a point deserving mention. There was, too, a falling-off in the last American crop yield, which, although to some extent offset by an increased production in Canada, has necessitated considerable encroachments upon the Argentine supply by direct shipments to the United States, which feature is likely to become more marked until the American crop can be secured. The world's production of linseed for the last five years was (in tons) approximately as follows:

		1911	1912	1913	1914	1915
India		564,000	641,000	536,000	382,000	395,000
Argentin	a	572,000	1,130,000	990,000	1,200,000	1,025,000
U.S.A.		484,000	702,000	446,000	389,000	346,000
Canada		269,000	653,000	438,000	179,000	315,000
Russia		558,000	563,000	621,000	550,000	550,000
Total		2,447,000	3,689,000	3,031,000	2,700,000	2,631,000

Compared with 1912, the decrease is almost one million tons. The shipments for the corresponding years were (in tons) as follows:

		1911_	1912	1913	1914	1915
India		524.873	356,797	366,280	341,075	180,250
Argentina		455,000	545,566	1,031.509	863,250	1,001,700
U.S.A & Can	ada	Nil	52,692	366,173	21,285	1,500
Russia		126,817	172,061	85,557	81,600	3,000
Total	]	1.106.690	1,127,116	1.849,519	1,307,210	1,186,450
Net Imports	U.K.	243,338	257,294	606,315	449.507	371,808

It will be seen from the above figures that the shipments from India for the past year show a decline of no less than 160,825 tons against the previous year, this being largely due to freight shortage, which, as already stated, is likely to continue an important factor. The fact is worth noting that whereas the proportion of net U.K. imports in the 1911 boom year was only about 22 per cent., it works out for last year at about 31 per cent., or only 3 per cent. less than for 1914. As regards future developments it is well to bear in mind that American consumption is now on a much larger scale, and that the River Plate exports this year are expected to show a deficit of roughly 200,000 tons, while the takings from that quarter for America will be larger. Given some relief in shipping, the market may be temporarily affected, but there is no mistaking the strong statistical position.

### Oil-seeds and Oil-census.

WITH the intention of taking a census of the stocks in the United Kingdom of all oil-seeds, etc., and of vegetable, animal, and fish oils, the Board of Trade have issued a schedule to the leading importers, exporters, manufacturers, agents, brokers, etc., requiring them to furnish particulars of all oil-seeds, etc., and of oils of which they are the owner.

Separate particulars of the quantities of all such oilseeds and oils are required. There are two sections in the schedule:

(a) Stocks held in warehouse and yard (including cargoes in vessels unloading or waiting to unload); (b) stocks held at factory or works. The items covered by the schedule include:

Oil-seeds, nuts, kernels, ctc.:

Cotton-seed, flax-seed, copra, ground-nuts, soyabeans, palm-kernels, other oil-seeds, nuts, and kernels.\*

Oils, vegetable:

Cocoanut oil, cotton-seed oil, ground-nut oil, linseed oil, palm oil, palm-kernel oil, soya-bean oil, other vegetable oils.\*

Oils and Fats, Animal:

Oleo oil, tallow, other animal oils and fats.\*

Oils and Fats, Fish and Marine Animal:

Seal oil, whale oil, fish oils.\*

\* Each kind of nut, kernel, and oil should be separately stated.

The stock figures are required to be sent in to the Board of Trade on or before January 29, 1916. We may add that under the Articles of Commerce (Returns, etc.) Act, 1914 (Section 1), powers are conferred on the Board of Trade to take this census. Nobody need be alarmed, however, at the census, as the underlying idea is merely to obtain an approximate estimate of the nation's stocks of these valuable materials. Of course, if it were ascertained beyond doubt that there are large stocks of, say, linseed oil, and that they are being unreasonably withheld from sale, then the Board of Trade have power to take possession, but we are not aware that the powers of requisition under the Act have been exercised up to the present. There is a desire to assist the Board of Trade in the above matter, and if any firm interested in oilseeds or kindred products has not received a schedule, application should be made to the Board of Trade, Gwydyr House, Whitehall, London, S.W. The information ascertained in the course of the census will be strictly confidential, and it is not proposed to make the figures public. If any doubt exists as to the actual ownership of goods, this point or any other may be put before the Board of Trade, and care must be taken to avoid the duplication of returns.

### "The Fragrant Weed."

THE BISHOP OF HEREFORD has declared in "The Times" that tobacco is not a necessary of life, and we ought to economise by giving it up during the war. That tobacco is not necessary to animal life is obvious, but we might argue that it is so to social life as we know it; at all events, one meets with a good many people who are only sociable when smoking, and not remarkably so even then. What would they be without this soothing influence? Nothing very definite can be gathered as to the effect of tobacco on different temperaments from such statistics as are available regarding its consumption in different countries. Holland is credited with the largest consump. tion per head, and the United States comes next, the proportion being about as 7 is to 41; Austria comes third, and at the bottom of the scale is Russia, Italy and Great Britain being the two next lowest. This, however, What are the common takes no account of Turkey. national characters, or conditions, upon which this grouping depends? They are not very apparent. As to the value of tobacco, its almost universal use is in its favour, but it is nevertheless an historical fact that wherever it has been introduced in any new country it has met with bitter opposition from both governments and moralists. Physicians, it is true, have in many countries hailed it with enthusiasm; but this fact is susceptible of more than one explanation, and nowhere is tobacco now of very much importance as a medicine. It remained in the Pharmacopœia Londinensis until 1788, but although employed occasionally as an emetic, the profession discouraged its internal administration and prescribed it but rarely, even for outward use. The ointment, which

drew from Culpeper an unusual outburst of praise and an ascription of eternal honour to its inventor, was dropped in 1746. In 1788 the leaf was reintroduced, and a wine and an infusion were added. Clark, in his "Conspectus," recommends these in dropsy, dysuria, asthma, etc., but they were speedily discarded, and tobacco lost much of its temporary favour with the College. 1836 it was retained mainly for its enema, which was given also in the British Pharmacopæia 1864 and 1867, but was excluded from the 1885 edition, although Tabaci Folia remained official until 1898, when the monograph was deleted. Happily no food and drugs inspector seems to have dreamt that chemists (many of whom sell tobacco) should supply the B.P. article, although inspectors sometimes act upon this absurd idea in regard to other articles in common use,

### The Question of Policy.

THE successful business-man is one who has laid down a fairly definite plan of where he wants to get and how he proposes to get there. In other words, he has a fixed policy. It is immaterial what the character or magnitude of the business may be, whether manufacturing or trading, wholesale or retail. Tinkers, tailors, apothecaries, drapers, all experience the same need of a standard by which business problems can be measured. In every trade or industry the business with no policy at all is like a ship without a rudder-drifting, and at the mercy of every eddy and cross-current in the stream of commerce. The chemist, like all other retailers, depends upon the general public for his trade. But the "public" is not one class, but many classes, differing widely in their needs and circumstances. problem for every retail chemist is, "What class am I going to serve?" There is the broad division into rich, middle-class, and poor. The wealthy expect tasteful premises in a good thoroughfare, and are suspicious of anything suggestive of a back street; they demand deference and attention rather than intrinsic value. The middle-class section of the community can afford to pay a price which leaves the trader a reasonable profit, but must first be convinced that they are receiving the utmost value for their money. The poor are able to satisfy only immediate requirements, and must therefore buy in the cheapest possible market. In reality each of these sections is subdivided and augmented by numerous groups, each with its own requirements. Many retailers aim at embracing all sections of the community in their clientèle, hoping to satisfy the divergent requirements of the several classes with the same organisation. Here and there such a course may appear to pay, but in the long run it will be less profitable nan concentrating the whole energy of the business n a given direction. The temporary success that may ttend such an elastic policy is really quite disproporionate to the damage that is likely to be done, though he latter may not be so immediately apparent. The ttempt to extend the scope of the business to other ections of the community than that from which the ulk of the custom is derived involves augmenting the ock, and this necessarily implies an absorption of With a disproportionate amount of capital cked up in assets of a not very easily realisable characr it may be difficult to take full advantage of oppormities for increasing trade in the principal channel. he retailer should decide what class he intends to ter for, then set out to give that class better value

or better service than his competitors. So far as the division into high-class, medium, and low-class trade is concerned, it must be remembered that the British public is much less homogeneous than is the case, for example, in America. The well-to-do, the middle, and the poorer classes regard one another with mutual distrust. The custom of the first cannot be permanently retained in a business patronised by other classes; while the poor are equally ready to resent the attendance of well-dressed people, and to assume that the shop must be "dear" on that account.

### Reviews of Books.

Water-purification Plants and their Operation. By MILTON F. STEIN.  $9\frac{1}{4} \times 5\frac{3}{4}$  in. Pp. 259. 10s. 6d. (London: Chapman & Hall, Ltd., 11 Henrietta Street, Covent Garden, W.C.)

MR. STEIN is assistant-engineer to the Cleveland Filtration Plant in the United States, and in dealing with the subject of water-purification plants states that he has tried to avoid being too technical, although certain parts of the work are elaborated for the benefit of trained chemists. First of all, a short chapter deals with the impurities of water, then are dealt with successively such matters as types of purification-plants, physical, chemical, and bacterial tests, interpretation of results, coagulation and sterilisation, water-softening, sedimentation, and filtration. A series of graphs is given to show the results of tests and the amounts of various chemicals required to produce coagulation, etc. Appendices are devoted to reagents.

Organic Chemistry, or Chemistry of the Carbon-compounds.
By Victor von Richter. Translated by Percy E.
Spielmann, Ph.D., B.Sc., F.I.C. Vol. I., "Chemistry
of the Aliphatic Series." 9 × 6 in. Pp. xvi +
719. 21s. net. (London: Kegan Paul, Trench, Trübner
& Co., Ltd., Broadway House, Carter Lane, E.C.)

Several translations by Professor E. F. Smith of Richter's "Organic Chemistry" have been published in the United States, but this is the first edition prepared in this country. Dr. Spielmann having employed the latest German original and Professor Smith's third American edition. In the preface it is explained by the publishers that, owing to Dr. Spielmann's employment by the Government on important work connected with explosives there has been a year's delay in the production of this volume. The translator acknowledges the assistance of Mr. W. P. Skertchly, F.I.C., and Mr. A. J. Greenaway in the preparation of the work. Richter's book is well known to advanced students, and it will not be necessary to deal with it at length. The introduction occupies about sixty-eight pages, and this is followed by sections dealing with hydrocarbons, halogenderivatives of the hydrecarbons, the monohydric alcohols, dihydric alcohols or glycols, trihydric alcohols, glycerols, tetrahydric alcohols, pentahydric alcohols or pentitols, hexand pely-hydric alcohols, carbohydrates, and animal substances of unknown composition. The arrangement of the type with which the book is printed is good, and helps to make a difficult subject clearer.

Spanish Pharmaceutical Products.—The inaugural meeting took place recently in the hall of the Colegio de Farmaceuticos, at Madrid, of a new association of manufacturers of proprietary pharmaceutical ehemicals, under the title of the Sociedad de Productores de Especialidades, and under the presidency of Senor D. Alvaro del Busto, the son of a former Madrid pharmacist. The idea of constituting the Association was suggested by the pharmacists at Bilbao to the producers of proprietary articles in Madrid, with a view to the regulation of prices, and the latter appointed a Committee to deal with the question, of which Senor Busto was elected Chairman. After examinaing the problem, the Committee approached the producers in all parts of Spain, proposing the establishment of a general Association for mutual aid and imprevement. This Association having now been formed, it is intended to support producers, both on a large as well as on a small scale, to denounce to the public authorities any attempts to dispose of products not manufactured by pharmacists, and to develop the export trado in competition with the products of other countries. It is now proposed to ask the Minister for Foreign Affairs to approach the Governments of France and England, with a view to the importation of German chemicals being permitted, it being contended that as the Spanish pharmacists are obliged to keep certain products, protection should be given to the imports of the raw materials.

### Westminster Wisdom.

By the "C. & D." Parliamentary Representative.

VACCINATION IN THE ARMY.

Mr. Tennant announced on Tuesday, January 25, that a soldier who is deemed to have been enlisted under the Military Service Bill will not be deemed to have consented to vaccination.

ARTIFICIAL LIMBS.

Mr. Tennant informed Mr. George Toulmin, in the House of Commons on January 20, that an institution has been opened at Rochampton House, Barnes, where soldiers who have lost limbs can have artificial ones fitted under the advice of orthopædie surgeons. The men are also taught how to use the artificial limbs.

MINERAL PHOSPHATES.

Mr. Austen Chamberlain has promised to draw the attention of the Government of India to the advisability of limiting or prohibiting the exports of bones from India, in view of the deficiency of mineral phosphates in that country and of the fact that the greater part of the bones exported goes to foreign countries.

SPIRITS FOR MEDICINAL PURPOSES.

Mr. Will Thorne having called the attention of the Minister of Munitions to the fact that people accustomed to purchasing small quantities of spirits now obtain liquor in bulk for private consumption, and that people who require small quantities for medicinal purposes cannot obtain them, Mr. Lloyd George has replied that the question of facilities to be allowed for the purchase of intoxicating liquors for off-consumption is receiving the attencating liquors for off-consumption is receiving the attention of the Central Control Board. There is, he adds, control Board. siderable evidence that the existing facilities for hawking

rials necessary to the manufacture of munitions; and, if so, what steps he proposes to take.—Mr. Lloyd George replied that he is communicating with the Board of Agriculture on the subject, with a view to reconciling the various public interests affected.

The hon, member also asked the President of the Board of Trade whether he is taking steps to ensure that the surplus of sulphate of ammonia over and above all home agricultural and munitions works' requirements may be equitably distributed among the buyers of neutral nations. equitably distributed among the buyers of neutral nations, who have already made contracts for large supplies.—Mr. Acland, who replied, said it seems quite possible that during the next few months there may not be any such surplus as suggested. He hopes, however, to be in a position to make a statement as to the position of the Government with regard to the export of sulphate of ammenia before the ond of the Sassian. ammonia before the end of the Session.

### A Chemist's Find.

HE illustration represents six mortars from a collection of twelve, which last week came under the hammer in one lot at an auction sale at a house in Pimlico, London. The C. & D. subscriber who acquired them chanced to be visiting London on other business on the day of sale. About noon he happened to see an advertisement of the sale in a daily paper. There was no time to spare, and he hastened to the address where the sale was taking place, only to find that it was impossible to see the mortars and pestles included in the sale until "Lot 131" was reached. The house rapidly filled with buyers, and these included several chemists, doctors, Red Cross nurses, dealers, and others, most of whom had made



intoxicating liquors are acting detrimentally in certain

THE METRIC SYSTEM.

It was stated in the House of Commons on January 20 It was stated in the House of Commons on January 20 that instruction is ordinarily given in the metric system of weights and measures in secondary and technical schools, but that there is a difficulty in asking local education authorities to extend their activities by holding classes on this subject. This reply was given on behalf of the Board of Education, and, speaking for the Board of Trade at the same time, the Under-Secretary said it had been stated not infrequently in consular reports that British trade is handicapped by the failure of the British trader to make use of the system in his catalogues and elsewhere. There is nothing in the present law to prevent him employing that system if he so desire. It is not possible, however, to insist on his so doing. insist on his so doing.

ALCOHOLIC WINES.
D. Rees asked the Home Secretary Sir J. D. Rees asked the Home Secretary on Monday whether he is aware that, though the legal limit of alcoholic strength allowed in non-excisable drinks is only 2 per cent., raisin-wine containing 10 and ginger-wine containing 11.6 per cent. of alcohol are sold by grocers; and whether the attention of the Central Control Board (Liquor Traffic) the attention of the Central Control Board (Liquor Traffic) is to be extended to others than liquor licensees, who now alone are exposed to its regulations.—Mr. Brace replied that he is advised that the beverages mentioned cannot legally be sold unless the seller holds the proper Excise and Justices' licences. Unless, therefore, they are sold unlawfully, the premises where they are sold are licensed premises within the meaning of the Board's Order, and are controlled accordingly.

SULPHATE OF AMMONIA.

In the House of Commons on January 24, Sir W. Essex asked the Minister of Munitions whether he is aware that the action of the Board of Agriculture in totally prohibiting the export of sulphate of ammonia is likely to diminish seriously the output of T.N.T. and other mate-

a hierographical pencil-mark to this coveted lot. Bidding for the mortars started at 5l., and ten guineas was reached in a second or two. Our correspondent then discovered that he had left his cheque-book at home and was possessed of an insufficiency of cash on his person, but, being a "Tyke" of the Joe Quinney variety, he ascertained that "more people know Tom Fool than Tom Fool knows," even though a stranger in a strange part of London. The temporary impecuniosity was thus easily overcome, and our correspondent had the satisfaction of being the highest bidder for a lot of twelve mortars, six of which are illustrated here. The remaining six are of little interest. One is handled and engraved and five are plain. A brief description of those we illustrate above is as follows (from left to right):

1. Decorated with a unicorn rampant enclosed in

floral wreath on back and front.

2. Ornamented by a draped figure, with Cupids on a balloon-shaped shield. The decorations are four time repeated.

3. Has a decoration in squares of scrolls four time

repeated.

4. The most valuable in the group; has the side decorated with Sphinx-like heads. It is dated 1657, an bears the initials  $\frac{8}{1 \text{ M}}$  on the reverse side.

5. Is also a good mortar, and is adorned by thr grotesque heads at equal intervals.

6. This is not of a particularly rare type. It bears t conventional fleur-de-lis of the Charles II. period.

Nos. 5 and 6 weigh about 6 lb. each, while the other average 31 lb. Our correspondent adds that he enjoy his day in town, and thinks he earned an average da; pay.

### The New President

of the Liverpool Chemists' Association.

MR. WILLIAM P. EVANS (Evans Sons Lescher & Webb, Ltd., Hanover Street, Liverpool), who has been elected President of the Liverpool Chemists' Association, entered upon the active duties of the office at the annual meeting on January 26. He is the third son of



MR. WILLIAM P. EVANS.

the late Edward Evans, his brothers Mr. John J. Evans, J.P., and Sir Edward Evans, and all of them are past Presidents of the Drug Club. The family has been identified with the Association since its inception, the name of Edward Evans appearing on the roll as Vice - President in the formative year (1849-50), and in 1854-55 he was elected President. In January 1899, on the occasion of the

Jubilee of the foundation of the Association, Mr. Edward Evans, who at that time was Deputy-Lieutenant of Denbighshire and had also served the county as High Sheriff, was again elected President of the Association, and a most interesting address, entitled "Seventy Years' Reminiscences of the Drug-trade," was read at the Jubilee meeting by Mr. John J. Evans on his behalf (see C. & D., January 21, 1899, p. 86). We recall that it was in 1911 that Mr. W. P. Evans became President of the Drug Club, having succeeded Mr. John C. Umney in that office, and at the same time his colleague and co-director, Mr. T. E. Lescher, of the London house, was elected Secretary, and still retains that position in the Club. It is interesting to note that Mr. Evans is the son of an original member of the Pharmaceutical Society and Mr. Lescher a grandson of a founder. Henry Sugden Evans (uncle of Mr. W. P. Evans) was President in 1857-59, and subsequently (1869-70) acted in the same capacity for the Pharmaceutical Society of Great Britain.

Mr. W. P. Evans was born at Rockferry in 1858, and dates his connection with the Liverpool Chemists' Association from 1876, when he was an apprentice in his father's business. This apprenticeship commenced in 1874, and he was in this way qualified to become an associate member. He has thus been closely interested in the Association for

o show.

In his forty years of a busy life Mr. Evans has found ime to serve with distinction in the district where he esides. Chairman of the Bidston (Cheshire) Parish ouncil and the Bidston Hill Management Committee, e played a leading part in the successful opposition the Birkenhead Corporation's effort to absorb Bidston irkenhead was beaten off and vainly sacrificed thousands f pounds. A renewed attempt, however, followed, but as quickly frustrated, Mr. Evans and his supporters be per cent. of the population being found alert.

almost forty years, and would seem to be entitled, if on the score of seniority alone, to "pass the Chair." That he will fill it worthily a glance at his record suffices

Mr. Evans's three sons are serving with H.M. Forces. aptain W. Sandford Evans, of the Welsh Regiment, as in the Retreat from Mons in September 1914, without ishap, but was wounded rather severely on October 29. he other sons are Mr. E. Herbert Sandford Evans ho served his apprenticeship at 56 Hanover Street, is

a member of the Liverpool Chemists' Association, and is now a lieutenant in the 18th Battalion Lancashire Fusiliers) and Second-Lieutenant Ernest S. Evans, 3/4th Cheshire Regiment.

On being interviewed by a representative of the C. & D. in regard to his presidential policy, Mr. Evans said: "I am not taking the office of President with any idea of posing as an ornamental chairman, but I shall devote all the time and energy needed in the interests of an old Association which has its home in the second city and leading port of the British Empire. Already I know, and long have known, many of the retail as well as all the wholesale members of the trade in this district. I propose to know each one of them better, and, in addition, to make the acquaintance of every member of the local trade, no matter whether the British Pharmaceutical Conference visits Liverpool or not in 1916. [It has since been decided that the 1916 meeting will be a formal one in London.] The members of the wholesale trade are friendly, and rub shoulders with each other. Why should not the same come to be said of the retail trade? I shall not be satisfied until each member of the trade is also a member of the Liverpool Chemists' Association, so that the whole trade can work together for the common good and in the interests of the community. As a business man, If hope to assist in organising the trade to the point demanded by the exigencies of the times."

While Mr. W. P. Evans is not the kind of man to

While Mr. W. P. Evans is not the kind of man to shine by reflected light, it seems fitting to mention that



MR. WILLIAM P. EVANS AND HIS THREE SONS.

Captain W. Sandford Evans, The Welsh Regiment; Lieut
E. H. S. Evans, 18th Batt. Lancashire Fusiliers; Second-Lieut.

Ernest S. Evans, 3/4th Cheshire Regiment.

his eldest brother, Mr. John James Evans, has been for many years a valued member of the Mersey Docks and Harbour Board, which controls about ten miles of docks; while his other senior brother (Sir Edward Evans) has obtained national celebrity by a long period of political organisation and propaganda, and has extensive acquaintance with the chemists of the Colonies. The Liverpool Chemists' Association owes a heavy debt to the Evans family, and the debt is being largely increased. Loyalty to Liverpool Chemists' Association on the part of the trade will ensure a record session for a body proud of its sixty-six years of useful service.

# With a Field Ambulance in Gallipoli.

By H. E. Chapmar.

In the last Summer Issue of The Chemist and Druggist appeared some notes by me on "Life with a Field Ambulance in England." A few weeks after the article was published my unit received orders for overseas, and very soon we were aboard one of the biggest liners afloat, bound for a destination unknown, but which proved to be that grave of military hopes and reputations, the Gallipoli Peninsula. On board our ship were several thousand troops—a goodly cargo, and a rare prize for the enemy submarine that succeeded in giving us the "tin-fish"! A couple of destroyers escorted us through the danger-zone into the Bay of Biscay, and there left us. Soon we were in the blue waters of the Mediterranean Ocean, and had been about five days out on our journey when the first moment of real excitement came along. Sitting idly on deck one afternoon, some of us noticed unusual interest being exhibited by those looking over the vessel's side, and by the ship being slowed down. The cause of the excitement proved to be two boats crammed with swarthy and jabbering sailors, clad in many-hued garments, and gesticulating wildly. These men were quickly taken on board, and the ship resumed her normal speed. The unfortunate fellows were the crew of a French merchantship, which had been torpedoed that same morning by an Austrian submarine, ten minutes being given them to clear into their boats. A few hours later the troops were below deck at tea, when two sharp reports rang out from the ship's gun, and at the same time the "alarm" sounded to repair immediately to our regimental posts on the different decks, and in a trice everyone was swarming up to take his place on deck. This was done in perfect order and silence, and on forming up each man was served out with a lifebelt from the supply kept ready at each post. In the meantime the ship had been swung completely round, so that she listed at an angle resembling that of a motor-cyclist turning a sharp corner at full speed. We were kept at our posts in nerve-racking uncertainty as to what had

Among the troops on board were three field ambulances, and these had to supply the personnel for staffing the ship's hospital and also the dispensers for the dispensary. Including myself, we were able to show three pharmacists, and we three shared the duties throughout the voyage. It was interesting work, and we were kept quite busy most of the time. A large proportion of the troops aboard had been vaccinated about a week before sailing, and were then in possession of inflamed and (many of them) septic arms, which necessitated fresh dressings each morning. This business kept busy several of the medical officers, the dispensers, and orderlies for the greater part of each forenoon, and the stock of dressings on board was just about exhausted by the time we got to port. We lay in harbour nearly a week, then the troops were split up and transhipped to smaller vessels, which carried them by night to their allotted spheres of activity on the Peninsula, forty miles distant. My brigade set off one afternoon in a small and exceedingly uncomfortable boat, and in silence and utter darkness we drew near to the sound of firing. Nearer still, and the sight of star-shells bursting over the dark hills, the sweep of searchlights from warships off the coast, and the louder crackle of rifle and machine-gun and the thud of bursting grenades told us plainly that we were at last "right there"—at the Front and among the realities of war. This was soon brought home more forcibly still to us, for one of our own R.A.M.C. men collapsed silently on the deck of the beat, shot instantly dead by a stray bullet through the brain. However, we landed without further mishap, and after a long and weary march reached our station in the early hours of the morning, lav down on the sand, and slept the sleep of the utterly tired. From that day onwards life with a field ambulance was a succession of thrills and one glorious uncertainty as to whether one would survive each day in safety. For a time our hospital and camp were on the

beach, within a stone's-throw of the sea—which, by the way, provided delightful bathing, the bottom being of white sand and the water as clear as crystal. The Turk, it must be placed on record, never deliberately fired on the Red Cross, but in so circumscribed an area as that held by our forces on the Peninsula no known spot was immune from shell or rifle fire, and often missiles meant for others came our way, so it was advisable at all tunes to be in one's sandbagged dug-out when a bombardment was going on. For the first few weeks flies were the plague of our life; their ravages were awful, and nothing could overcome their activities; also they aggravated or caused the disease which was so sally prevalent during the hot mouths.

which was so sadly prevalent during the hot months.

While stationed near the sea one had splendid opportunities of watching the daily exhibition of naval gunnery Turkish trenches scarred the steep hills which our men had been unable to scale and hold, so strongly were they protected; but each day, at a range of two or three miles, the guns of the monitors and cruisers would open fire on these trenches, and one could watch the accuracy of aim and devastating effect of the high explosive as great columns of carrie and swales should be the circumstants. columns of earth and smoke shot into the air right along the line of enemy works. After a couple of weeks of seaside life we were moved more inland nearer the heart of things, and established a permanent advanced dressing station and hospital in a gully—hills each side and at the station and hospital in a gully—hills each side and at the back, and in front an open space giving on to the main saps and communications leading to the various lines of trenches. Here we dug ourselves in and did good work for the sick and wounded, being kept busy till the time came to pack up for good and all. Someone has said that every Red Cross man who worked on the Peninsula was a hero. Certainly the stretcher-bearers had an arduous and risky task. All wounded had to be carried by hand—there was no scope for ambulance-wagons—and generally there was no scope for ambulance-wagons—and generally the bearers had to work under fire. Much of the carrying was done by night, when the artillery was silent and only machine-gun and rifle fire was intermittently active. Next door to our hospital I had my dispensary—a deep wedge cut into the side of a hill built up with double rows of sandbags at each side and in front—the whole being roofed with a fourfold thickness of tarpaulin. This structure was calculated to be proof against most things, the one danger being the possibility of a shell coming straight on the roof—a contingency which, fortunately, did not occur. Here was held the daily sick parade of our own and various neighbouring units, and here I prepared the many medicines, lotions, and dressings required for use in the hospital. In time this domain acquired quite a pharmaceutical appearance, with its neatly arranged shelves carrying bottles of tinet. iodi, lotio ac. carb., ol, ricini, etc., and its boxes in the walls packed with cotton-wool, gauze, and bandages. The dispenser's sleeping apartment was a cavity below the level of the floor, dug some 5 ft. into the back wall of the dispensary and somewhat resembling a robber's cave in appearance, a safe retreat provided the 4 ft of solid in appearance—a safe retreat provided the 4 ft. of solid earth forming the roof did not collapse on the sleeper! A building of similar construction to this dispensary served as a shelter for the sick, and on one occasion was the scene of a startling and nearly tragic incident. Divine service was being held one Sunday afternoon—the chaplain standing just outside the entrance to the sandbag shelter, and a small crowd of us R.A.M.C. men being grouped all round him. Scarcely half-a-dozen yards away from the structure shells had been whistling overhead for some time times and a few betters. in search of a battery right beyond one of the hills. The in search of a battery right beyond one of the hills. The congregation was lustily singing a hymn when in the mids of it came a terrific explosion, and we were all enveloped in a cloud of dust and smoke. Half stunned by the shock one looked round to see who was killed and injured, but no casualties were apparent. A six-inch shrapnel shell has come clean through the roof of the shelter and explode inside wreeking nearly executing the convergent. come clean through the roof of the shelter and explosions inside, wrecking nearly everything there and covering th floor with bullets and fragments of shell-case. The sand bagged walls had prevented the bullets from spreading, and footwardly not a girdle protection was inside at the time. He fortunately not a single patient was inside at the time. He the shell fallen only a few feet further our way the resumust have been too ghastly to contemplate. I can safe say that this was the most dramatic service I have evattended—or want to! Towards the end of the year to mild and supply weather which had provided for so lo attended—or want to! Towards the end of the year mild and sunny weather which had prevailed for so lo suddenly changed to a prolonged rainstorm, which we followed by snow and a period of intense cold. Saps a trenches which had been as dry and hard as asphalt becaused ships and the cold ships and the cold ships are small and ships a sund ship knee-deep, and in some cases waist-deep, in mud and slu Progress from one point to another became difficult, espe ally for the mule transport which carried all stores a food, and very soon the hospitals were taking in the macases of frost-bitten and chilled feet—the inevitable outcoff the sudden chimatic change. Fortunately the spell

not last long, more sunny days followed and the earth dried up again; but before the winter proper had set in the area of which I have been writing was evacuated, and, in the words of the Press Bureau, the troops were "transferred to another sphere of activity," taking with them their memories, many and varied, of this deeply warscarred land.

Not easily will those who have sojourned there forget Gallipoli—its arid barrenness and blazing summer heat; the splendour of its wonderful sunsets; the beauty of its star-lit nights! Truly its soil is rich in material for an Iliad no less heroic than is provided by the historic plain of Troy (not so greatly distant across the waters of the straits) where Greek and Trojan fought in the misty past!

### Kitasato:

The Discoverer of Diphtheria Antitoxin and his Co-workers in the Imperial Institute for the Study of Infectious Diseases, Tokyo.

THE following observations are based upon a twenty-two years' record of the work done in the above-named Institute, the period covered being 1892 to 1913.

IT is not yet fifty years since Japan introduced Western civilisation, but in this short period she has trained a corps of brilliant workers whose researches have led to some of the most important advances in medical science in recent years. The report which is issued from the Tokyo Tsukiji Typefoundry is clearly printed in English, and bar some occasional misprints is an exceedingly



DR. S. KITASATO.

creditable production, the half-tone illustrations being well done and the maps and plans carefully drawn and accurately reproduced.

The Institute is not yet twenty-five years old, for it was only in 1892 that it was founded by a wealthy citizen, Mr. Yukichi Fukuyawa, a man of lofty ideals and exalted public spirit, who had previously done much for the introduction of

Vestern civilisation into Japan and for the development f the country.

This gentleman was the first to appreciate the importnce of the work of Dr. S. Kitasato, when the latter sturned to Japan after seven years' sojourn in Germany, and he provided a laboratory for Kitasato and furnished ne means necessary to enable him to continue his searches. From the first Dr. Kitasato has been in charge the Institute, as a private undertaking, since it was ken over in 1899 by the Imperial Government, and tterly since the amalgamation with it in 1906 of the rum and Lymph Institute; and therefore the story of Institute may be regarded as the story of the life-work its director, one of Japan's most famous men.

During Kitasato's residence in Berlin he worked under och, one of whose assistants at that time was the now lebrated Von Behring, with whom Kitasato collaborated one of the epoch-making researches that rendered the esing years of last century memorable. Bacteriology is then practically in its infancy, and men were groping the result of the dim dawn of the new era. Kitasato is the first to obtain the tetanus bacillus in pure culture, and in the following year he and Von Behring made the mentous discovery that the blood-serum of animals

immunised against diphtheria or against tetanus, when added to cultures of the respective bacilli, neutralised their power to provoke disease. This discovery, which was announced in December 1890 in a joint paper by the two men, formed the starting-point of the serum-treatment of diphtheria and tetanus. At that time the death-rate from diphtheria was from 33 to 50 per cent., to-day it averages about 10 per cent. In 1891 Kitasato discovered the method by which the tubercle bacillus could be obtained in pure culture, and this led ultimately to the introduction of tuberculin. He also found that the bacilli ordinarily present in tuberculous sputum are dead even though they continue to stain well. In 1894, after his return to Japan, he discovered, independently of Yersin, the bacillus of bubonic plague during an epidemic in Hong-Kong. In the twenty years since then he has carried out researches dealing with diphtheria, tetanus, plague, cholera, typhoid, tuberculosis, dysentery, leprosy, and numerous allied subjects, and many papers have been published by him during these years.

Associated with Kitasato in the management of the Institute are some very able men, those in charge of the various departments being Drs. T. Kitashima, K. Shiga, S. Hata, and S. Umeno. Other members of the staff are Drs. M. Miyajima, Y. Teruuchi, and S. Kusama, in addition to seventeen paid assistants and several unpaid workers attached to departments for special research-work.

The best-known name in this country of those mentioned above is that of Hata, who, as the collaborator of Ehrlich, was jointly responsible for the introduction of the substance known as Ehrlich-Hata "606," or, as it is now called, salvarsan, and also of its successor neo-salvarsan. It was in the Imperial Institute at Tokyo that salvarsan was first tried on a human case, and therefore the world is in a double sense indebted to Japan for the introduction of these agents for the treatment of syphilis. Hata attended the International Medical Congress in London in 1913, when he read two papers, one giving an account of the use of neo-salvarsan at the Imperial Institute and the other on a method for artificially cultivating the spirochæta of recurring fever, his process being an improvement of that discovered by Noguchi, another distinguished Japanese who is associated with the Rockefeller Institute, New York. In a list, printed in this report, of over 400 papers published in the twenty years, 1894-1913, by members of the Institute, Hata's name stands opposite sixteen, one of the earliest of these being on the germicidal action of human gastric juice on the plague bacillus. Hata is a chemist as well as a bacteriologist, and he has charge of the department for the examination of disinfecting, prophylactic, and curative materials, and also of the teaching staff of the Institute.

Shiga, who has charge of the hospital and medical treatment of infectious diseases, as well as the serum and vaccine department, is well known as a great authority on bacillary dysentery, the organism producing which he discovered in 1897. On that disease alone in the next fourteen years he wrote no fewer than twelve papers, besides eight other papers on allied subjects—notably whooping-cough and beri-beri. Dysentery is produced by three causes—amœbæ, flagellatæ, and bacilli. The first-named occur chiefly in India and the Middle East, and the most effective treatment is by injections of emetine. Flagellate dysentery is common in the Near East, and thousands of our soldiers suffered from it in the Dardanelles, but so far no curative agent has been discovered. The third variety, bacillary dysentery, is occasionally found in Western Europe, but is the only one occurring in Japan, where it has been periodically epidemic for a thousand years. Epidemics do not stay in a particular region for a great length of time, usually from one to three years, but they recur in from ten to twenty years. Shiga has found that there are several distinctly indepenand vaccine, in order to be effective, must be autogenous that is, prepared from the bacillus producing the disease. Moreover, dysentery-serum is quite useless for the treatment of amœbic or flagellate dysentery, which are the varieties at present most commonly met with in this country.

Another member, or ex-member, of the Institute who has done splendid work is Dr. Ogata, now Professor of Hygiene in the Tokyo Imperial University. Ogata's published papers in connection with the Institute deal chiefly with tubercle; but he with a colleague, Jasuhara, shares with Kitasato and Von Behring the honour of the discovery of immunity, a paper by these two men having been printed in January 1891, in which they give an account of the immunisation of animals against anthrax infection.

Every infectious disease known to occur in Japan is being studied at the Institute, these including typhoid, paratyphoid, cholera, plague, tuberculosis, hydrophobia, leprosy, smallpox, syphilis, malaria, trachoma, beri-beri, hook-worm disease, protozoan and parasitic diseases, snake-bites, rat-bites, etc. In connection with rat-bites salvarsan has been used successfully, more than ten cases having been treated, and all of them cured. Chemotherapy, of which salvarsan is a type, is being closely studied at the Institute in cases of bacterial, parasitic, and other infections produced by viruses not yet isolated.

Leprosy is common in Japan, the first known epidemic

having taken place about 614 A.D. There are five public leprosoriums in the country besides several institutions supported by philanthropic bodies. One of these, supported by a British Society, is at Meguro, near Tokyo. It has accommodation for sixty patients, who are medically treated by the staff of the Imperial Institute. Experiments with a view to the discovery of a practical method for cultivating the leprosy bacillus are being carried on, and, of course, constant search is being made for the causal agents in such diseases as smallpox.

A hospital and dispensary are attached to the Institute, and by far the larger number of the dispensary patients come to receive preventive treatment against hydrophobia. The majority of the hospital patients are diphtheria cases, 3,315 of these having been treated between 1899 and 1913, with a death-rate of 12 per cent. Vaccine lymph has been produced since 1896, since which year nineteen million tubes have been prepared and sold, sufficient to vaccinate a hundred million people. In one month in 1908, during an epidemic of smallpox, more than two million tubes were supplied. Serums and vaccines for the prevention and treatment of various infectious diseases are also made.

The Institute is situated on elevated ground in a park about forty-four acres in extent, and the buildings themselves occupy about seven acres. They consist of administrative buildings (one of which contains a library of over 7,000 volumes); culture media preparing house; animal-house, which contains 100 iron cages, in which were kept in 1913 11,000 mice, 4,000 guinea-pigs, 2.400 rabbits, 100 frogs, 56 doves, 36 monkeys, besides dogs, cats, goats, etc.; photographic house, which contains an ultra-microscope and an ultra-violet microscope; stables with 200 horses; veterinary-operation building, lymph-preparation building, teaching building with lecture-hall fitted with epidiascope, museum, power plant, hospital with fifty beds, monkeyhouse, etc. A unique building is the bioterium, an insect-house, the walls and roof of which are made of glass, with a concrete floor, and the temperature of which is kept uniform all the year round, for the keeping of insects which produce disease. The building covers an area of sixty square yards, and contains also an aquarium. There are also five ponds made of cement for keeping experimental fish and other aquatic animals.

An important feature of the Institute is a three-months' post-graduate course, twice a year, in bacteriology and public health. The number who took advantage of these The number who took advantage of these courses from 1894 to 1913 was 2,089, and they came from all parts of Japan. Foreigners also come from China, Europe, and the United States for the bacteriological course. The budget expenses for carrying on the Institute in 1914 exceeded 254,000 yen, or about 26,000%.

Brains, not bricks, should be the school motto in the matter of laboratories. A young Faraday in a shed is worth a dozen scientific showmen in costly buildings with lavish outfits. The accommodation, I am told, is at present ample in the larger schools. I have, indeed, seen laboratories which the larger schools. tories which the most np-to-date college would envy.-Sir William Osler.

### A Mysterious Measure.

A Few Months ago when James Hardie & Son, 68 High Street, Dundee, had a periodical visit from the inspector of weights and measures

they submitted to him a conical glass measure graduated to 480 minims and marked with a port-eullis within an oval line, and above it the figures 1826, as shown in the engraving. The original is 5 in, high. The inspector remarked that this was the oldest measure that he when an old assistant of the firm ealled on Mr. Henry J. Hunt, the pre-sent proprietor of the business, he was asked if he could remember it, as another had been found in another had been found in a store-room. The visitor was ignorant of its origin, and informed Mr. Hunt that he thought the figures do not refer to a year, but to an official department, probably the Standards Department, Westminster, seeing that the portcullis is used on the measure. Curiosity having been Curiosity having been aroused, inquiry was made. It was first ascertained that fluid measures of the denomination in question were not stamped by the

Department prior to 1871, and that the measure in question is unlikely to have been stamped at the Standards Department of the Board of Trade, Westminster Serial numbers are issued for standards stamped by that Department, and the number 1826 was allotted in the year 1885 to a set of standards for the Indian Govern-

standards for the Indian Government, which did not, however, include any apothecaries' fluid measures. The old verification stamp of the inspectors of weights and measures for the burgh of Arbroath, which is, of course in the same courty as course, in the same county as Dundee, was a portcullis, usually enclosed in a shield, as shown.

The stamp used by the City of

Westminster inspectors at the time when that eity was a separate local authority under the Weights and Measures Acts

was a portcullis as shown in the engraving, but the number 1826 on such a stamp, although

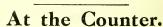
engraving, but the number 1826 on such a stamp, although no doubt originally representing a date, possibly that of the year when a particular make of stamping punches was first brought into use at the Westminster Office, would not neeessarily denote the date of stamping.

On acquainting Mr. Hunt with these observations he informed us that the inspector still held the opinion that the measure is an old one, and must have been stamped prior to 1878. He showed Mr. Hunt two sets of scale-pair stamped in the same manner and bearing date 1902 and 1912 respectively. How this measure came to be intact (presuming it to be a nonagenarian) is a mystery to Mr. Hunt. Can any reader throw further light on the matter? Hunt. Can any reader throw further light on the matter?



ARBTH.

Westmanster



A KAFFIR'S ORDER is sent to us by Mr. Thomas Hannal Amersfoort, Transvaal. Although the syntax is a bit of the handwriting is excellent:

the handwriting is excellent:

the bearer Phillip has a son (10) years of age. This Boy a troubled very often so Phillip thanks that must be daiseness I when this attack is due the Boy start vometting, then follow sweating & lost of spirite. I notice that Phillip had used curosi a little time, & I had told him to call on you & buy necessa medicine I dont know what would be good but I notice that will be the same case as that one I had told you about Polchi Phillips boy I hear of him said that the boy weak so adviced him to get some medicine from you & he will p you at the same time try as he stay away of from here he from Standerton Dist.

# MORSONS IN MIDDLESEX A chapter in British Chemical Industry.

IN the tenth decade of its history the chemical and pharmaceutical manufacturing business, founded by the late Thomas N. R. Morson, has become an integral part of British chemical-industry. It is a remarkable circumstance that the most important pharmaceutical-chemical factories in Europe have grown from retail pharmacies, and several British, French, and German

chemical-factories could be named which belong to this category. It is also notable that the activities of French chemists a century ago, particularly the discovery of alkaloids, gave great impetus to chemical-manufactures associated with pharmacy.
The business of Thomas
Morson & Son, Ltd., is an outstanding British example of this. A few months ago the business, as carried on at 14 Elm Street, Gray's Inn Road, London, and Ponder's End, Middlesex, was converted into a private limited company, and the directors are inserting in this Winter Issue of THE CHEMIST AND DRUGGIST a monograph descriptive of the manufactures carried on by them, this being illustrated with an exceptionally fine series of photographs of the manufacturing laboratories at Ponder's End. Perusal of this monograph cannot fail to prove that British chemical-industry is not. decadent, and this is all the more striking when the growth of the business is considered.

caries' Society. Young Morson's tastes did not lie in the direction of surgery, but any opportunities of acquiring chemical knowledge were seized with avidity. He attended lectures on chemistry at Guy's Hospital, Mr. William Allen being one of the lecturers, and also at the Royal Institution under Mr. Brande. It is stated that at this early period he consorted with several young men

of similar tastes, among whom was Faraday, and that as a chemical society they met regularly in the neighbourhood of Fleet Street. This was probably the "London Chemical Society" which had a short existence in the early days of the nineteenth century.

### Influence of French Chemistry.

In 1818 young Morson went to Paris, doubtless with the idea of advancing his knowledge of chemistry, as it must be remembered that at that time chemical initiative was largely in the hands of the French. Lavoisier, it is true, had been executed by a ruthless Government, but he had left many brilliant young men to follow up his work. Young Morson obtained a situation with Louis Antoine Planche (1776-1840), who had a pharmacy in the Rue du Mont Blanc. Planche was, moreover, one of the collaborators of"Journal de Pharmacie (which was established in 1809), and was associated in the conduct of that





(Reproduced from "The Chemist and Druggist," May 14, 1870.)

Mr. Thomas Newborn Robert Morson was born in 1800 at Stratford-le-Bow, and at the age of fourteen was apprenticed to Mr. Charles Dunn, a retired army surgeon, who kept a retail shop in Fleet Market (now farringdon Street). Mr. Dunn died a year after, and the business, with the apprentice, was transferred to Mr. Henry Morley, who became a Master of the Apothe-

journal with such eminent men as Vauquelin (1763-1829), Parmentier (1737-1813), Cadet de Gassicourt (1769-1821), Pelletier (1788-1842), and Caventou. Vauquelin, who was an assistant and afterwards the collaborator of Fourcroy (1755-1809), discovered quinic acid, asparagin, and camphoric acid, and with Fourcroy spent much time in differentiating the active principles of Peruvian bark. Planche was a man of

great ability, his contributions to the "Journal" being great ability, his contributions to the Journal being mainly on points in practical pharmacy. An important influence must have been exerted upon young Morson by these chemists, but particularly by Pelletier and Caventou, whose contributions to the "Journal" were at this time very numerous. These two workers discovered strychnine in 1818, brucine in 1819, and veratrine in 1820. They also separated quinine from the mixture of alkaloids which Comez had prepared the mixture of alkaloids which Gomez had prepared from cinchona. It is not surprising, therefore, that when Morson returned to London in 1821 to take over the retail department of his apprentice-master's business he was imbued with the spirit of French chemistry. He immediately started making alkaloids, and it is claimed that he was the first to make pure quinine sulphate and morphine salts on a commercial scale in England. A list which he issued in 1822 quotes prices for these alkaloids and for those newly discovered by Pelletier and Caventou. lodine and "hydriodate of potass" were also priced, these being what we should now call "new remedies." Morson's chemical knowledge and manipulative skill made him the person to apply to for rare chemicals, and soon he was obliged to move into larger premises in Southampton Row, and to build a laboratory at Hornsey Road, where fine chemicals were made and also creosote, which he was the first to make in this country.

### HIS PUBLIC WORK.

Mr. T. N. R. Morson was a founder of the Chemical Society and the Pharmaceutical Society, which were both established in 1841. He took an active part at the famous meeting held at the Crown and Anchor Tavern on April 15, 1841, when the Pharmaceutical Society was founded. Mr. Morson became President in 1848 and again in 1859. He frequently contributed to the scientific meetings, and at the second meeting, on June 9, 1841, read a paper on "The Rise and Progress of Pharmacy," which concluded as follows:

Let us bear in mind that all branches of the medical profession are dependent on each other, and that we are bound to render initial assistance and mutual respect. The day has passed for one class to be subservient to another, but the day has arrived when the public demands from every department in the profession an equal degree of proficiency.

At the next meeting, on July 7, his subject was "Vegetable Extracts," and he suggested that a series of tables giving the yield of extract from plants under various conditions of soil and season would form a valuable contribution to pharmaceutical science. Three years afterwards he gave many details about kava, then a new remedy, and described Pattinson's process for preparing magnesia from magnesian limestone. In 1846 he interested an evening meeting with an account of some new "Dragées Minerales" which were being sold in Paris, and in 1848 called attention to the ease with which pure chloroform is decomposed by light. In 1853 he was involved in a controversy regarding the composition of Quevenne's iron, and his last paper, in 1872, gave the glycerin method of detecting the substitution of creosote by carbolic acid. Mr. Morson died in 1874. His son,

### Mr. Thomas Morson,

born is 1825 and educated mainly in France, was initiated into the art of pharmacy in Mathe's establishment, rue 8t. Honoré, Paris, and from there went to the Pharmacie Béral, rue de la Paix, then came to England to join his father in business. In 1857 he married Mademoiselle Dagomet, daughter of a Boulogne pharmacien, and lived above the pharmacy in Southampton Row. Mr. Morson greatly developed the manufacturing side. Besides the laboratory at No. 124 there was another in Queen Square close by, which, with Hornsey Road factory, was merged in Summerfield Works, Homerton, before the retail pharmacy was closed in 1900. Mr. Thomas Morson died in 1908, but had previously given over the business to his two sons, Mr. T. P. Morson and Mr. A. R. Morson, who are now the senior directors of the company. During fourteen years Mr. Robert Taubman was a partner, his death in 1905 being practically coterminous with the partnership.

The relationship of the members of the Morson family is shown in the annexed genealogical tree:

T. N. R. Morson (1800—1874)

Thomas Morson (1825—1908)

T. P. Morson
(Chairman of the directors)

T. D. Morson.

L. J. Morson,

THE DIRECTORS OF THOMAS MORSON & SON, LTD.
Mr. T. P. Morson and Mr. A. R. Morson are the senior directors, the other directors being Mr. T. D. Morson,
Mr. L. Morson and Dr. C. S. Play.

Mr. L. J. Morson, and Dr. C. S. Roy.
Mr. Thomas Pierre Morson, the chairman and managing director, was educated at University College School, Gower Street, afterwards in 1868 going to Mannheim to learn German. In 1870 he studied at the Royal College of Chemistry in Oxford Street, and attended the lectures of Professor Franklin. After that he served his apprenticeship with Ferris & Co., Bristol, and passed the Minor examination in 1874. In 1879 he became partner in the firm of T. Morson & Son.

Mr. Albert Robert Morson, a managing director, was born 1855. He was educated at University College School, and subsequently served his apprenticeship with Stoddard, of Bristol. Afterwards he took a two-year course of chemistry at the Royal School of Mines, South Kensington, and became a partner in the firm in 1883.

Mr. Thomas Dagomet Morson, F.C.S., works managing director, is the eldest son of Mr. T. Pierre Morson. He was born in 1880, and was educated at Haileybury College (1894-97), and University College of London under Sir William Ramsay (1897-99). He matriculated at London University in 1898, and left University College to carry out research-work under Professor H. E. Armstrong at the Central Technical College, South Kensington (1899-1901). These researches were not completed when in the spring of 1901, instead of entering a German University as originally intended, Mr. T. D. Morson had to superintend the removal of the works from Homerton and assist in the equipment, design, and control of the firm's new factory at Ponder's End, where he remained until 1905, in which year he was transferred to the head office on the death of Mr. Robert Taubman. In the autumn of 1904 Mr, T, D, Morson visited a number of chemical and other works in U.S.A. and Canada in connection with the annual general meeting of the Society of Chemical Industry, which was held that year in New York. He was also responsible for the firm's exhibit of chemicals which gained a gold medal at the St. Louis Exposition in the same year. In 1906 Mr. T. D. Morson was appointed Hon, Secretary of the Chemical Industry Club, which is closely associated with the Society of Chemical Industry, and in the summer of 1914 was appointed Hon. Secretary of the London Section of the Society.

Mr. Leslie Jules Morson, managing director, is the third son of Thomas Pierre Morson. He was born in 1834, and was educated at Haileybury College (1897-1901). On leaving college he studied at the "Square," and subsequently pursued a course of commercial training. In 1905 he took a position in the laboratories at Ponder's End, specialising in the analytical and research departments. In 1909 he was transferred to the head offices, being responsible for a large part of the commercial and export side of the business.

Dr. C. S. Roy, A.I.E.E., works managing director and technologist, obtained his early training at the East London Technical College and East London College, University of London, under Professor J. T. Hewitt. He worked for nearly six years in various laboratories in different parts of England, and for many months tramped the country as an ordinary labourer, earning just enough to live upon, but learning to know the conditions and habits of the working man, and seizing every opportunity of thoroughly understanding them and their methods of work. He then proceeded to Jena University, where he

In March 1914 Dr. Roy became associated with T. Morson | chemical and pharmaceutical products which are made at & Son, and in a few months was appointed works the Summerfield Works:

manager. Besides his chemical qualifications, he is a fully trained electrical and mechanical engineer.

### THE SUMMERFIELD WORKS.

The offices and warehouses were moved to 14 Elm Street, Grav's Inn Road, W.C., in 1904, and previously the manufacturing processes had been concentrated at Summerfield Works, Ponders End, Middlesex. These works cover several acres of ground and are connected with London warehouse by a motor service. A C. & D. representative, who spent a day at the Summerfield Works recently, was astonished at the extent of the premises and the range of manufactures carried on. Hundreds of chemicals are daily in course of manufacture, the arrangements being definitely planned to facilitate the work. Some of the processes are, for obvious reasons, carried out in the open-e.g., the

making of hydrocyanic acid and valerianates—and others have assigned to them special "shops," where the particular chemical is being

obtained the degree of Ph.D. ("Magna cum Laude"). [made continuously. The following is a list of the chief

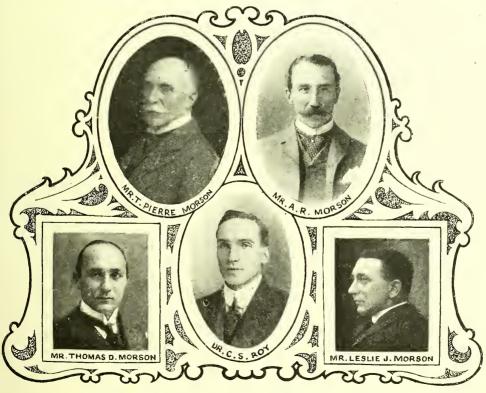


MR. THOMAS MORSON (b. 1825, d. 1908).

Thymol

Urotropine

Alkaloids Aluminium salts Amyl compounds Analytical reagents Barium salts Bismuth salts Borates Bromides Chloroform Chrysarobin Citrates Collodion Creosote Ergotin Ethers Formalin Glycerophosphates Guaiacol Hydrobromic acid Hypophosphites Iodides Iodine (resublimed) Iodoform Lactates Lactophosphates Lister's cyanide Lithium salts Oleates Oxalates Papain Pepsin Phosphates Pyroxylin Resinoids Salicylates Scale preparations Sodium chloride Sodium sulphate Strontium salts Tartrates Terebene Valerianates Zinc salts



THE BOARD OF DIRECTORS. THOMAS MORSON & SON, LTD.

Analyfical Control.

The analytical and research laboratories control the output of the whole factory, and upon these depends the system of reference numbers which is a feature of Morson's chemicals. Each batch of chemical made has to pass rigid tests before it is taken into stock, and is supplied with a reference number which is quoted on every package of that batch. In this way the history of each chemical can be traced from the raw material to the finished product. Besides the guarantee to the purchaser which this reference system gives to the Morson products it has been found useful in identifying particular characteristics for certain technical purposes. In connection with the Summerfield Works there is a splendid library of books on chemistry and the allied sciences. To Dr. C. S. Roy is due the selection and collation carried out with a view to the special requirements of a maker of fine chemicals. We were much impressed with the loyalty and devotion of the employes: in the special circumstances of a rapidly expanding factory and the requirements of urgent warwork, the response has been spontaneous and enthusiastic. The appreciation of the directors and the workers is mutual. It is under these advantageous conditions that British-made chemicals are produced at the Summerfield Works.

### The Story of Palladium.

THE suggestion has been made that palladium might be employed in place of platinum for certain uses now that the latter substance is in such great demand for war-purposes as to create a shortage in the metal. The story of the discovery of palladium, and the manner in which it was introduced to the scientific world, is one of the most interesting and curious, and is perhaps unfamiliar to the present generation. William Hyde Wollaston (1766-1828), who discovered the method of working platinum, was educated as a medical man and practised in Huntingdon, Bury St. Edmunds, and London. At that time, however, medical practice was not the lucrative profession which it is to-day, and Wollaston deserted it for the pursuit of chemistry. He lived in Hunter Street, Brunswick Square, London, and set up a laboratory in the garden of his house, where, with the aid of a faithful servant, he worked his platinum process in secret, only disclosing the method in the Bakerian lecture which he delivered in 1828, the year of his death. It is of interest, in view of the present price of platinum at 121. an ounce, to note that in 1805 platinum crucibles were sold at 178.6d. per oz. by Carey in the Strand and the wire at 16s. It was in the course of his work on platinum that Wollaston was attracted to an associated metal which he called palladium, the name being a compliment, as he explained afterwards, to Dr. Olbers, who had recently discovered the planet Pallas. The method by which the discovery was announced to the world is one of the most curions inaginable. In 1803 an anonymous circular was sent to a number of persons interested in science, among them William Nicholson, of "Nicholson's Journal," now the "Philosophical Magazine," stating that samples of a new metal, "palladium, or new silver," could be purchased from Mrs. Forster, Gerrard Street, Soho, at 5s., 10s. 6d., and 21s. each, at the rate of 1s, a grain. Among those who obtained a sample was Richard Chenevix, a Fellow of the Royal Society, who, in fact, bought up the whole supply deposited with Mrs. Forster. Chenevix read a paper before the Royal Society on May 12, 1803, entitled "Inquiries Concerning the Nature of a Metallic Substance lately sold in London as a new Metal under the title of Palladium," in which he "proved" that the new metal was an amalgam of two parts of platinum and one part of mercury. The paper is a very long one, and enumerates a large number of analytical and synthetical experiments which the author conducted. The portion of the paper headed "Conclusions" begins:

The substance which has been treated of in this paper must convince us how dangerous it is to form a theory

before we are provided with a sufficient number of facts, or to substitute the results of a few observations for the general laws of nature.

On December 18, 1803, "Nicholson's Journal" received an unsigned letter offering a reward of 201, for the artificial production of palladium. The letter was in the same handwriting as the note sent with the sample received earlier in the year. The letter was as follows:

SIR,—As I see it said in one of your journals that the new metal I have called palladium is not a new noble metal, as I have said it is, but an imposition and a compound of platina and quicksilver, I hope you will do me justice in your next and tell your readers I promised a reward of 200, new its Mr. East to be here the property is the content of the property is the content of the property is the property in the property in the property is the property in the property in the property is the property in the property in the property is the property in the property in the property is the property in the property in the property is the property in the property in the property is the property in the property in the property is the property in the property in the property is the property in the property in the property is the property in the property in the property is the property in the property in the property is the property in the property in the property is the property in the property in the property is the property in the property in the property is the property in the property is the property in t in your next and tell your readers I promised a reward of 20t., now in Mrs. Forster's hands, to anyone that will make only 20 grs. of real palladium before any three gentlemen chymists you please to name, yourself one if you like. That he may have plenty of his ingredients let him use 20 times as much quicksilver, 20 times as much platina, and, in short, of anything else he pleases to use; neither he nor I can make a single grain. Pray be careful in trying what it is he makes, for the mistake must happen by not trying it rightly. My reason for not saying where it was found was that I might make some advantage of it, as I have a right to do. If you think fit to publish this I beg you to give the names of the umpires, as I have desired to Mrs. Forster to keep the money till next midsummer and to deliver it only in case they can assure her that the real metal is made by a certificate signed by you and by them on this check. I hope a little bit of whatever is made may be left with Mrs. Forster. be left with Mrs. Forster.

The outcome of this was that Nicholson nominated two judges, but the 20% was never claimed. On June 24, 1804, Wollaston read a paper before the Royal Society entitled "On a New Metal Found in Crude Platina, and on July 4, 1805, one entitled "On the Discovery of Palladium with Observations on other Substances Found with Platina," in which he announced openly his discovery of palladium. The interesting fact remains that at the time of Chenevix's paper before the Royal Society Wollaston was Secretary of that body, and must have assisted in promoting the publication of Chenevix's paper in the "Transactions." It is said that he tried all he could to induce Chenevix to withdraw the paper, and although Chenevix tried to maintain his position in a subsequent communication, it is clear that he felt humiliated, as he retired to Freiburg, and his subsequent scientific papers were published abroad.

The present-day supply of palladium ore comes from Sudbury, Ontario, where it occurs associated with copper and nickel. It is employed in dental alloys and for electro-plating mirrors. The hydrogen-absorbing properties of palladium are well known. Palladium is as hard at platinum, but is less ductile and considerably lighter.

### Increasing Cost and Selling Prices.

When the cost price of an article increases by any considerable amount a revision of the selling price becomes necessary. But if no greater amount is added to the selling price than that by which the cost has increased the profit will no longer be the same as before, when expressed as a percentage of sales. Thus an article costing 6s. and selling for 10s. realises 40 per cent. profit. If the cost increases by 2s., and the same amount is added to the selling price, the profit will be reduced to 33\(^1\) per cent. It is, therefore, obvious that the increase to the selling price must be greater than the rise in cost if profits are to continue to bear the same proportion to sales.

The simplest method of ascertaining the correct amount to add is as follows: First, multiply the difference between the old and revised cost prices by 100: divide the product by the difference between 100 and the percentage profit previously realised. The quotient, expressed in \(l.\) s. \(d.\) is the amount to add to the present selling price. In the above example the working will be: When the cost price of an article increases by any con-

$$\frac{2s. \times 100}{100 - 40} = \frac{£10}{60} = 3s. 4d.$$

By making the new selling price 13s. 4d the profit will remain at 40 per cent.

### The Scottish Central Checking Bureau.

Where Insurance Act Prescriptions are Priced and Checked.

THIS institution was inaugurated in order that the expenditure for drugs and appliances throughout expenditure for drugs and appliances throughout Scotland should be kept under constant and close supervision. For this purpose a joint Committee representing the fifty-six Insurance Committees was appointed, and is designated the Drug Accounts Committee. It consists of fourteen members, ten of whom are representatives of Insurance Committees, two are medical representatives, and two represent the chemists. In this connection the interests of the chemists are well safeguarded by their elected representatives, Mr. J. Rutherford Hill and Mr. G. Shiach Kitchin, who represent the counties and burghs Their wide and practical knowledge of National Health Insurance pricing problems is fully borne out by the very valuable evidence which they submitted to the Departmental Committee which was appointed to consider the Drug Tariff, and their great enthusiasm and untiring energy have resulted in a high

standard of efficiency being attained by the Bureau in a comparatively short time. The function of the Bureau is to price the chemists' prescriptions and make out their accounts. In addition to this an analytical check is carried out in order to ascertain whether the prescriptions issued by individual doctors or by the doctors in a particular area are abnormal as regards frequency or as regards the quantity and character of drugs ordered, or entail undue expenditure out of the Drug Fund.

To Mr. A. B. Gilmour, a pharmacist, was entrusted the very responsible duty of organising and supervising the work of the Bureau. The colossal nature of this task can

be readily understood when it is remembered that the Bureau commenced on April 26, 1915, with a million prescriptions in arrears and a staff which had to be trained to its duties. Mr. Gilmour has had a quarter of a century's experience of the drug-trade. Previous to he opening of the Bureau he was for two years general nanager to Gibson & Co., chemists and druggists, Edinburgh, where he had full control of a warehouse, five ranches, and a staff of twenty-five persons. For twelve nd a half years he was with Cockburn & Co., Ltd., and or over eight years was manager of their chief branch ports. Such a varied experience as that of the doctor's spensary, the institution, the post-office, the country d city branch, and a group of branches has given Mr. ilmour an almost unique experience for the difficult and ierous post he now occupies. It has the very great advantage of having broadened his outlook, and his varied business training enables him to look at matters from a very comprehensive point of view. Mr. Gilmour is a hard worker and has the happy knack of making a hobby of his work. In his desire to secure efficiency and master the intricacies of the thousand-and-one debatable pricing problems he has displayed the dogged dourness of the Scot

The Bureau is situated in a central part of Glasgow-20 Renfrew Street. The offices are divided into four departments: (1) sorting-room, (2) technical room, (3) operating-room and general office, and (4) superintendent's room. The offices are eminently suitable for this particular work, as they have a southern aspect, are well lit, and are not overshadowed by neighbouring buildings.

As each month's prescriptions are delivered at the Bureau the number of chemists' bundles for each area is immediately recorded

in a book for the purpose, and the forms are then automatically numbered, at the same time receiving a distinctive letter, each month being lettered in alphabetical sequence— A for January, B for February, and so on. The number of forms from each chemist is entered on an index-card, and a note of the numbers is at once forwarded to the Clerk of the Insurance Committee, who is then in a position to make a provisional payment to account. Much unnecessary work is entailed on account of the following irregularities:

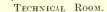
(1) Forms belonging to areas other than the one being dealt with.
(2) B forms instead of A

(3) Prescriptions written

on scraps of paper.
(4) Soldiers' and Sailors' Association forms.

(5) Forms unsigned by the medical practitioner. (6) Forms not bearing the chemist's name and address.

The prescriptions are now transferred to the



This department is undoubtedly the most important of all, and is under the direct supervision of the Assistant-Superintendent, who is a qualified chemist of wide experience, and to whom the pricers refer all doubtful points. Such matters as he is unable to deal with are brought to the Superintendent and discussed in all their bearings, and a decision is only given after careful reference to standard works and the application of practical experience. Should any doubt still remain the matter is referred to the Technical Committee.

The pricers have all had several years' experience of

the drug-trade. For the first two or three months all their work is re-checked, and afterwards a sample check is made. The difficulty of pricing has been tremendously increased on account of the monthly alterations in the Tariff, and especially because twelve different wholesale price-lists have been approved by the various Committees for pricing the ex-Tariff drugs.

The work of this department is so arranged that the same pricers always deal with the same areas. This has



THE SUPERINTENDENT'S ROOM. Mr. A. B. Gilmour is not only a pharmacist, but a master of system, who is as familiar with American methods as with British practice. Beside him on the desk is the C. & D. Diary.

or over eight years was manager of their chief branch t St. Enoch Square, Glasgow: he took up this appointment after having managed the Govan branch of Osmond Co., Partick. Mr. Gilmour passed the Minor examination in April 1899, and thereafter managed the Fort Villiam branch of Henry Mitchell & Son, Inverness, before qualifying he was for eighteen months dispenser and superintendent's clerk at the Woodilee Mental Hostial, Lenzie, in which position he kept the statutory tal, Lenzie, in which position he kept the statutory gisters and was mainly responsible for the elaborate atistical data which were embodied in the annual

the advantage of familiarising them with the idiosyncrasies of the doctors' prescribing and writing. It is interesting to hear a pricer tell you that a certain patient is getting the same inixture or that a particular doctor

Elliman's embrocation Hair's asthma-cure Himrod's asthma-cure Hinksman's astluna-cure Potter's asthma-cure Schiffmann's asthma-cure

ARTICLES NOT DIRECTLY USED IN THE TREATMENT OF DISEASE.

Antiseptic sawdust Calf's-foot jelly Contrexéville water Hall's wine Health salt Litmus books

Mustard-bran Quinine pessaries Rubinat water Saccharin tablets Vibrona wine

### DISINFECTANTS.

Condy's fluid Jeyes' fluid FEES.

Sanitas fluid

Copying fees Fees for foods for domicilary patients

Late fees Fees for orders stock Sunday fees

To ensure accuracy each pricer has before her for continual reference the "Drug Tariff Informer," which was compiled by Messrs, G. S. Kitchin and J. B. McVitie. This set of tables is invaluable for speedy and accurate pricing. After dealing with the prescriptions the pricer writes out a report setting forth:

(a) Articles disallowed.(b) Articles the pricing of which is postponed, such as capsules, no strength stated; pills and powders, no number stated; plasters, no size stated; lint and wool, no weight stated.

(c) Proprietaries prescribed.
(d) General remarks regarding abnormal quantities or cost.

Pazo ointment

TECHNICAL STAFF.

The pricing is not done by young girls of sixteen without knowledge of dispensing or pharmacy, as has been arranged in England, but by women who are experienced dispensers. Each pricer has her "Tariff Informer" in front of her for ready reference. The certificate on the wall is that of Mr. James Shields, the Assistant Superintendent. Underneath the certificate is the notice-board, and on it are placed the decisions regarding difficulties.

is still prescribing certain drugs. In other words, each pricer becomes a specialist in her area, and acquires great alacrity in noticing irregularities in rules and regulations.

Arising out of a scrutiny and check of over a million prescriptions received from the whole of Scotland, the Bureau recently issued an interesting memorandum, in which it is stated that many practitioners and chemists do not understand what is allowed to be supplied under

the regulations.  $\Lambda$  knowledge of the following list would prevent the inadvertent prescribing of articles which, if refused by the chemist, might be regarded as a grievance by the insured person, or, if supplied, would result in actual loss to the chemist.

### DISALLOWED ITEMS.

APPLIANCES NOT ON SCHEDULE.

Glycerin syringe Atomisers Bougies Jaconette Bunion-plasters Leeches Nasal douche Nasal inhaler Bunion-rests Brushes Catgut Nipple-shield Corn-silk Poroplastic jacket Eye-cup Respirators Eye-dropper Eye-shade Spongo-piline Supports for flat feet Elastic kneecap Thermogene Elastic stockings Thermal wool Gamgee tissue Trusses Glass syringe

### Toilet-articles.

Camphor ice Hazeline snow Camphorated chalk Icilma cream Carbolic tooth-powder Toilet-powder Coconut oil Lip-salve Cold-cream Odol Glycerin and cucumber Pumice-stone Hair-cream Toilet-soaps Hazeline cream Winter cream

### Secret Remedies.

Allcock's plasters Blinblow's asthma-powder Douglas' Maori cigarettes Eno's fruit-salt

The prescriptions, with the pricers' reports, are scrutinised by the superintendent and the important matters are carefully gone into, his observations thereon being sent to the Clerks of the various Insurance Committees. The prescriptions are then transferred to the

### OPERATING-ROOM.

This is a very interesting department, and contains about 450% worth of labour-saving mechanical appliances.



OPERATING STAFF.

the right are the two Burroughs adding and listing electrically driven machines for making out the chemists' accounts. To the left are the two comptometers, while behind these are the three typists.

The accounts are made out in triplicate. Two copies ar forwarded to the Insurance Committee Clerk, who send one to the chemist; the third copy is retained by the

Bureau. For this purpose two twelve-column Burroughs adding and listing machines are employed They are driven by electric-motor power, and, in addition to tabulating the number and value of each form, also give the total amount of the account. In order to overtake the arrears four expert operators work in relays, and the



CLERICAL STAFF. Recording the values of the various doctors' prescriptions.

machines are kept going continuously from 9 A.M. to 9 P.M. The accounts are now transferred to the clerical staff and the necessary entries made in the chemists' index-cards, after which the accounts and observations are sent to the Insurance Clerks.

### SORTING-ROOM.

The function of this department is to re-sort the prescriptions according to doctors and arrange them into their respective values. One side of the room is pigeon-holed, and the girls sort out the forms under the different letters of the alphabet, afterwards taking in turn those under each letter and the separate names. When one recalls that many of the forms are merely initialed and the writing almost illegible, it can readily be understood that this work is not so simple as it appears. The forms issued by each doctor are now classified according to their respective values. This information is then transferred to the doctor's index-card, where the following particulars are noted:

(1) The number of forms issued.

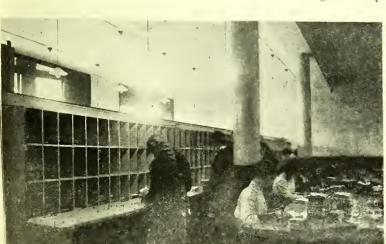
Total value. Average value.

Number of forms over 1s.

(5) Number of persons on doctor's panel.

Frequency of prescribing.

(6) Frequency of p. (7) Cost per person.



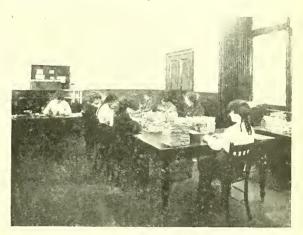
SORTING STAFF.

eparating the forms under the respective doctors and arranging them for the clerical staff.

(8) Number and value of stock forms. (9) Number and value of visitors' forms. (10) Number and value of domiciliary forms.

For speed and accuracy two comptometers are used for making the necessary calculations. With this information it can at once be seen which doctors' prescriptions are abnormal in frequency and cost. It also has the advantage of permitting the ready comparison of the relative cost per insured person in an area and of the areas in relation to each other. It is an admitted fact that the abnormal prescribing of a small minority of the doctors in any area can deplete the Drug Fund. which might on the one hand result in the chemist being discounted, or on the other hand encroach on the doctors' floating sixpence. It is very interesting to note the comparison per prescription between the different areas. Why should the cost per form in some burghs be 50 per cent. more than in others, and why should the counties vary in the same ratio? It is also interesting to note that the cost per form in one area is exactly double that of another, and that the cost per insured person on one doctor's panel is three or four times greater than another doctor who has approximately the same number of patients.

The card system is freely used in the Bureau. There



STAMPING STAFF.

Scrutinising the forms for irregularities and numbering them.

are sets for chemists and others for doctors, the size being 8 in. by 5 in. For chemists the cards are

white for counties and pink for burghs. One kind of card is for recording each month: Number of forms; number allowed; number partly disallowed; value, average price per form; number of stock forms; value of stock forms: number of D forms; value of D forms; number of V forms; value of V forms. There are four blank lines and spaces for the signatures of counter, pricer, and clerk. The other card is a summary, also monthly, of forms, value, average; stock forms, value, average; D forms, value, average; V forms, value, average. The doctors' cards are azure and pale and dark green, their purpose being as already explained. The details for these cards are furnished by a recording sheet, 10 in. by 8 in., part of which we reproduce. It is in this that the clerks record the value of each prescription on a script. Four sets of such columns are given on the sheet. It is obvious that it is easy to calculate the values from the records so made. A chemist's account

as rendered is simply vertical rows of figures, the first columns showing the number of the prescriptions, the others the values. Thus on one account 202 prescriptions are priced, the total being 7l. 9s.  $7\frac{1}{2}d$ .,  $2\frac{1}{2}d$ . being the lowest and 3s.  $8\frac{1}{2}d$ . the highest.

In summing up the situation the Superintendent informed the writer that up to the beginning of this year over a million and a-half prescriptions had been priced, and that for some weeks an average of 85,000 per week had been dealt with, also that in a short time

I.C

Particulars as to cost of Prescriptions issued during

of (address)

Value.	Prescrip- tions.	Total Cost.	Value.	Prescrip- tions.	Total Coct.		
			B /f.				
1/2			1/03				
1			1/1				
11/2			1/11/2				
2			1/2				
21			1/21				
3			1/3				
3}			$1/3\frac{1}{3}$				
4		-	1/4				
44			1/41/2				

SECTION OF A RECORD SHEET.

the work will be up to date. During this comparatively short period a valuable memorandum anent recommendations designed to secure uniformity and efficiency in the system of checking throughout Scotland was prepared. This memorandum was submitted to the Conference of Insurance Committees held in Dundee, and the recommendations contained therein were unanimously approved.

The Superintendent pays a high tribute to the chemists all over the country for their helpful co-operation in carrying out his suggestions, and he confidently predicts that ere long the Bureau will be able to send out all accounts within six weeks of receipt of the prescriptions.

# English and French Pharmacy. A Contrast by V. Renneboog.

As everyone knows, English chemists' shops are quite different from French ones. The first are really "shops" where you can not only have made up your prescriptions, but obtain many other things not essentially pharmaceutical, such as toilet-preparations, soaps and perfumes stationery, photographic and optical sundries, wines and spirits. The dispensing department occupies a rather small part of the business. French pharmacies are especially devoted to dispensing-work, the sale of accessories, surgical or hygienic articles being a less important part of the work. That is why, looking in the window and entering an English chemist and druggist's shop, the French raveller is surprised and charmed by the display of so many diverse and attractive articles, while a British tourist, wanting a hairbrush or a Kodak film, is astonished when the French pharmacist confesses that he does not sell these.

France is the country for eachets, ampoules, granular sugar preparations, mineral waters, and wines, England for compressed tablets, lozenges, gelatin-coated pills and capsules, compound tinetures, and powders. Each country uses the natural products of its own or its Colonies' soil. In England the tendency is, in consequence, towards aromatic drugs and spices, such as peppermint, anise, cloves, and ginger; in France people ask more for dried leaves, flowers, roots, and barks, chiefly lime and elder flowers,

eucalyptus-leaves, cinchona-bark, liquorice-root, and they are versed in the art of making infusions and medicinal wines with these raw products. In household cooking the difference in taste between English and French people is quite as noticeable; the first make up their pastry and food with strong aromatics such as caraway-seeds, cardamons, and ginger, while the French employ sweet almonds, vanilla, and orange-flowers.

vanilla, and orange-flowers.

Ammonium and ammoniated salts are rarely to be found in the French Pharmacopoia. Liq. ammonii acetat, and liq. anmonii anisat. are about the only representatives, but in England quinine, iron, and other salts have their ammoniated compounds, and nearly every cough-mixture contains ammonia. For hypodermic injections French dectors prescribe "ampoules," while English practitioners prefer the "tablets" to be dissolved in the syringe. Tincture of iodine, hydrogen peroxide, and pyramidon are much in demand on the Continent, but in England tinct. camph. co., infus. gent. co., squill preparations, lavender, malt extract, and cod-liver oil emulsion are more in favour. In a large Paris-pharmacy a customer sent for some bay rum, which the chemist could not supply, nor could his wholesale firm. In another pharmacy Beecham's pills and seidlitz-powders were unknown. Of course, there are in Paris and other important towns some English or interestical, wholesale howers.

In a large Paris pharmacy a customer sent for some bay rum, which the chemist could not supply, nor could his wholesale firm. In another pharmacy Beecham's pills and scidlitz-powders were unknown. Of course, there are in Paris and other important towns some English or international pharmacies and special wholesale houses where English and foreign medicines are stocked, but, generally speaking, English pharmaceutical preparations are scarce in France. The English chemist, being more of a business man than a scientist, has not, as a rule, time to prepare his own galenicals; he orders them from the wholesale house, and it would surprise an ordinary French pharmacist to know that ointments, compound pills, syrups, and tinctures are supplied by these firms. But England is the European country where preserved and concentrated foods are most in use, where all kinds of foods and drugs are tinned and preserved for sale by the retailer. This is due perhaps to the large number of Colonial and foreign customers to whom it is easier and more economical to send things "ready for use."

due perhaps to the large number of Colonial and foreign customers to whom it is easier and more economical to send things "ready for use."

In dispensing prescriptions the English chemist measures liquids and weighs solids; in France liquids are weighed as well as solids. This is a thing English dispensers cannot understand. I tried many times to explain to English confrères that the French method is easier and as accurate as their own, but English chemists do not think so and imagine that French doctors and pharmacists must require to keep in mind the specific gravity of every liquid. Moreover, the B.P. 1915, although adopting the metric system, continues the rule: Solids by weight and liquids by measure.

measure.

In France Epsom salt is called "Sel anglais" (English salt), tinct. eamph. co. is "Elixir paregorique de Londres," tinct. opii crocata is "Laudanum liquide de Sydenham." and pulv. ipecac. c. opio is "Poudre de Dower." In England Fowler's arsenical solution is pink; in France white. Lavender salts are called "Sels volatils d'Angleterre," court-plaster is known as "Taffetas anglais," and the best rubber tubes are "Feuille anglaise." English chemists' shops are generally called after the name of their owners; in Paris almost every "pharmacie" has its trade-mark, according to street or place where it

English chemists' shops are generally called after the name of their owners; in Paris almost every "pharmacie" has its trade-mark, according to street or place where it is situated; for instance, "Pharmacie des Chanps-Elysées." "Pharmacie de la Gare du Nord." or "Pharmacie du Louvre." Previous to the war half-holidays and Sunday closing were unknown in France; only a few pharmacists used to stop business on Sunday afternoon. Owing to the war and the reduction of staffs there is a certain slackness in business, and many have adopted a system of early closing. A good many French chemists' shops are closed from 12 till 2 p.m. at lunch, close for the day at 7.30 p.m., and do not open on Sunday. The public do not grumble about it; every hardship caused by the war is stoically accepted, and people do not like to trouble the pharmacist unnecessarily during the night.

accepted, and people do not like to trouble the pharmacist unnecessarily during the night.

In both England and France there is a great demand for many pharmaceutical articles used by the soldiers at the Front, such as first-aid cases, antiseptic dressings, respirators against asphyxiating gases, tincture of iodine, ampoules, water-sterilising tablets, and insecticides. Large drug-stores with branches in different towns, like Boots' in England, do not exist in France; French laws do not allow one and the same person or firm to put their name on different pharmacies. Almost in every town, however, there are large "commercial" pharmacies which sell at low cash prices, hence competition among pharmacists is very keen, and the French pharmacien, like his British confrired does not often make a fortune in business. It is to be loped that after the war greater prosperity will ensue in the drug-trade, and that instead of obtaining chemicals from Germany the Allies will manufacture their own, and in this way obtain two profits.

### Notes from an Old Newspaper.

WE are indebted to Mr. T. Desnos (Jules Denoual & Co.) for the Ioan of No. 7,201 of "The Whitehall Evening Post" from Thursday, November 3, to Saturday, November 5, 1796. It is a four-page sheet measuring 18 in. by 13 in., four columns to the page, and sold at 4½d. There is a great temptation to enter into the history of early newspapers on an occasion like this.

The "Whitehall Evening Post" was commenced on September 18, 1718, and issued three times a week, the tri-weekly form being a favourite in the eighteenth century. The "Whitehall Evening Post" was founded as a Whig newspaper, and was intended to be a more pro-nounced Ministerial organ than the "Flying Post," one of the most popular journals of the day. Defoe wrote anonymously for the first number, and for most of the others until June 1720, and posed as a Whig, although he contributed as a Tory to the "Daily Post," wherein "Robinson Crusoe" first appeared. There does not Hemet's Essence of Pearl and Pearl Dentifrice for the Teeth and Gums.

The public are respectfully informed, that in order to prevent the Impositions daily practised by Persons counterfeiting the above-mentioned long-established Medicines, the following Words are (by Permission) engraved in the Stamp, "J. Henet, Bayley, Son, and Blew, Cockspur Street," and that none are genuine but what have those Words engraved in the Stamp, and also a Label with the Words "Bayley, Son, and Blew, Cockspur Street, London," pasted on the Back of each Bottle and Box. And all Venders of the above Medicines are hereby informed that counterfeiting the Stamp is Felony.

The Essence and Dentifrice are sold wholesale and retail by Bayley, Son, and Blew, Cockspur Street, London. Price The public are respectfully informed, that in order to

by Bayley, Son. and Blew, Cockspur Street, London. Price

2s. 9d. each, Stamps included.

Further Proofs of the Efficacy of the following Medicine. See the Pamphlet of Cures delivered with every Bottle.

THE CARDIAC TINCTURE. By the King's Patent.

THE CARDIAC AND NERVOUS TINCTURE, for the Relief and Cure of Disorders of the Head, Stomach, and Bowels; gouty, bilious, and nervous Complaints; Acidity, Wind, Spasms, and Costiveness: Loss of Appetite and Indigestion, Debility, Palsy, &c.



ppear to be anything like a file of the paper extant, least not in the National collections. Only a comratively few numbers of the journal are preserved in e British Museum library. It has also few claims to tiquity; but no London paper at present in existence n claim an earlier date unless it be the official "London azette," which was founded in 1665. The oldest daily per in England is the "Public Ledger," established in 59, a journal which deals only with commercial matters.

te "Morning Post" is the oldest London daily newsper; it was founded in 1772. "The Times" follows, per; it was founded in 1772. "The Times" follows, the habitory going back to 1785, when it appeared as the condon Daily Universal Register," a cumbrous title vich was replaced by "The Times" in 1788. Mention by be made of Houghton's "Collection for the Imprement of Husbandry and Trade," a periodical public on which first appeared in 1681, and continued for larly 600 numbers. Houghton was an apothecary, and aerwards became a dealer in tea coffee, and chocolate aerwards became a dealer in tea, coffee, and chocolate. The interest in the "Whitehall Evening Post," part of front page of which we reproduce, is in the adver-ments of patent medicines. Two of these, which we rerint, were later on included in the schedule of the Adicine-stamp Act.

Letters are then quoted from correspondents in Brighton, Chelmsford, Whetstone, Chester, King's Bench, and Steine, Brighton, and the advertisement, which extends to more than a column on the front page, concludes:

Sold in bottles at 2s. 9d., 5s. 5d., and 11s. 6d., and in stopper flints at 3s. 6d., 7s., and 14s. at No. 36 Gerrard Street, Soho, where Mr. Rymer may be consulted personally

Street, Soho, where Mr. Rymer may be consulted personally or by letters post-paid.

There are Pint Bottles at One Guinea each, by which there is a considerable saving.

Messrs. Dicey and Beynon, No. 10 Bow Church Yard, are appointed by Mr. Rymer the sole Wholesale Venders of the above Medicine (as well as of the Detergent Pills for the Cure of Diseased Liver, attended with Asthma and Dropsical Legs; for the Discharge of Gall Stones; Destruction of Worms, etc. See tract); of whom, and every Vender of their Medicines in all the principal Towns, and of the following Persons in London, it may be had Retail, viz. Mr. Thomas Evans, Bookseller, No. 46 Paternoster Row; Moore, Stationers, No. 63 Bishopsgate Street Within; Fred. Smith, Chemist, No. 29 Haymarket; and Tutt, Royal Exchange.

PRICES CURRENT. A column of the paper is devoted to "The Prices of Merchandise in General" in London on Tuesday, November 1, 1796. The following are some of the entries:

	0 0
Alum, p. ton—	$\mathbf{\pounds}$ s. $\mathbf{\pounds}$ s.
British .	 25 0 @ 26 5
Roch., p. c	1 10 @ 1 12
A TOO	
Aqua Fortis, p. lb.—	s. d. s. d.
Single	0 8
Double	1 3
Arsenick, p. c.	43 0 @ 45 0
Ashes, p. c.—	
American Pot	35 0 @ <b>5</b> 4 0
Zinerican Pot	
American Pot Pearl	50 0 @ 69 0
Dantzick	57 0 @ 61 0
Dantzick Russia	57 0 @ 60 0
Trussia I	
Koningsburgh	50 0 @ 56 0
Trieste	Uncertain
Sp. Barilla	35 0 @ 36 6
Cinnamon, p. lb.	14 9 @ 16 6
Cloves	10 3 @ 11 4
Cochineal, p. lb.—	
Cochinear, p. 10.—	15 ( () 15 (
Garbled	. 15 6 @ 17 6
Ginger, p. c.—	$\pounds s$ . $\pounds s$ .
Jamaica white	4 6 @ 5 5
Do. for export	3 16 @ 4 15
Black	. 3 0 @ 3 11
Do. for export	. 2 12 @ 3 0
Doi for export	
Barbadoes	4 15 @ 5 2
Do. for export	4 5 @ 5 10
Indigo, p. lb.—	
Spanish	4 9 @ 11 0
N. Orleans	2 4 @ 7 4
East India	2 3 @ 10 6
/ v	2 3 (6) 10 0
Carolina .	2 2 @ 4 0
Jamaica .	None
Madder, p. c.—	2.01.0
Tadder, p. c.	Tr 0 0 01 0
Dutch Crop	76 0 @ 96 0
., ,, Ombro	- 60 0 @ <b>75</b> 0
., ,, Gamene	32 0 @ 56 0
,, ,, Gamene	
Nutmegs, p. lb.	18 0 @ 33 0
Oil. per ton—	$\mathfrak{L}$ s. $\mathfrak{L}$ s.
Spermaceti	83 0 @ 85 0
Seal Cod	40 0 @ 41 10
Cal	
C 30	37 0 @ 39 0
Saltpetre, p. c.—	
East India Ro.	2 17 @ 2 19
British Do	3 5 @ 3 7
DITUSH 190,	
Soap, p. c.	s. d. s. d.
Alicant London yellow	90 0 @ 102 0
Loudon vollow	
Domain yenow	
Mottled	84 0 @ 86 0
Tamarinds, p. b.—	~
West India	72 0 @ 76 0
	72 0 @ 76 0
Turpentine, p. c.—	
American	20 0 @ 21 0
	30 0 91

### Old Shop-signs.

SOME centuries ago it was very commonly believed that the civet cat was the source of musk; hence this animal naturally became a very common sign for perfumers all over Europe. A seventeenth-century board has been traced to Holland, with the picture of a civet cat and the following legend beneath it:

"Dit's in de Civet kat, gelyk gy kunt aanschouwen, Maar komt hier bin, hier zyn parfuimen voor mannen en vrouwen."

Or, in English:

"This is the Civet Cat, as you may see; but come within: perfumes are sold here for men and women." Not unfrequently well-known personages figured on contemporary signboards. In "The Newes" of August 24, 1655, appeared the following advertisement:

"Whereas Thomas Williams, of the Society of real and well meaning Chymists, hath prepared certain Medicynes for the cure and prevention of the Plague, at cheap rates, without Benefit to himself and for the publick good, In pursuance of directions from authority, be it known that these said medicynes are to be had at Mr. Thomas Fidges, in Fountain Court, Shore Lanc, near Fleet St., and are also left by him to be disposed of at the Green Ball, within Ludgate, the Ben Jonson's Head, new Gatehouse, etc."

The bulky figure of "Philipus Aureolus Theophrastus Paracelsus Bombast von Hohenheim," as the old clahemist was fond of calling himself, was seized upon

frequently as an apothecaries' signboard, and one of these used to hang in Old Fish Street, London, as we find from an advertisement in the "London Gazette" on July 22, 1680. "The Black Ball and Lillyhead" appears at first a rather abstruse sign. As a matter of fact, in the seventeenth century a black ball was a favourite sign adopted by quack doctors and astrologists. The singularly successful quack, Lilly, was very popular among his fellow-quacks, and one Thomas Saffold had the portrait of Lilly added to the black ball—which explains the sign. The address was:

"At the Black Ball and Lillyhcad, next door to the Feather shops that are within Blackfriars Gateway, which is over against Ludgate Church, just by Ludgate in London."

Our quack set out that he was an approved and licensed physician or student in astrology, and had practised physick since September 1674 by the Bishop of London's licence. His astrological claims promised that he would—

"Foretell what s'ever was
By consequence to come to pass,
As death of great men, alterations
Diseases, battles, inundations,
Or searched a planet's house to know
Who'd broke and robbed a house below,
Examined Venus and the Moon
To find who stole a silver spoon."

The dragon, which early became a favourite sign for druggists, was, of course, not an heraldic sign, but derives from alchemical reactions in mediæval times, apparently indicating Mercury, as an old print, with a picture of a dragon eating his own tail, contains the legend

"Mercurius recte et chymice precipitatus vel sublimatus, in sua propria aqua resolutus et rursum coagulatus."

That is to say, "Mercury rightly precipitated or sublimated in its own water, dissolved and again coagulated"; hence the dragon, in addition to being a common druggist's signboard, became a regular "property" of this class of shopkeeper, and was often painted on his drug-pots, and was the meaning of the old stuffed crocodile, so often hung up in the alchemists' laboratories, as it was about the nearest objectionable animal which could do service for a dragon. The salamander was, of course, another animal of this class and also represented certain chemical action, owing to its fabled power of resisting the action of fire. The ideas of the early naturalists must have been extraordinary, for in a Bestiarium in the Royal Library of Brussels is to be found a description of it, saying that it lives on pure fire, and produces a substance which is neither silk, linen, nor wool, of which garments are made that can only be cleaned with fire, and that if the animal itself should fall into a burning fire it would at once extinguish the flames. The supposed incombustibility of the salamander explains why it was eagerly adopted as a signboard for alchemists, apothecaries, and the like, and it may still be found in the older Continental towns in use as such. Why the early Venetian printers adopted it as a signboard is unknown. Although the bull is a sign not used by apothecaries or perfumers, it probably owes its origin as a sign to some extent to the efforts of the old alchemists and astrologers. In Ben Jonson's "Alchymist" (Act ii., sc. i.) occurs the following passage:

Face. "What say you to his Constellation, Doctor-the Balance?"
Sub. "No, that is stale and common; a townsman born

Sub. "No, that is stale and common; a townsman born in Taurus gives the Bull—or the Bull's head; in Aries, the Ram, a poor devise."

A sign which was used exclusively by apothecaries was the Mortar and Pestle. Among the "celebrities" who sold drugs under this sign was the noted John Moore, "author of the celebrated worm-powder," to whom Pope addressed some stanzas commencing:

"How much, egregious Moore, are we Deceived by shows and forms; Whate'er we think, whate'er we see, All human kind are worms."

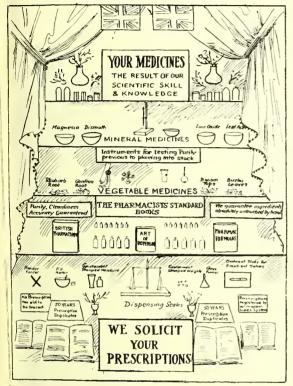
Moore kept a shop with the sign of the Mortar and Pestle in St. Laurence Pountney Lane, London. Every week the newspapers contained his advertisements.

### A Dispensing Window.

By a Window-dresser.

A Positive "Prescription Magnet" window-display which will both educate the public and increase your dispensing turnover is described in this article.

Firstly, gather together all old prescription-books and surplus apparatus, and purchase a few sheets of coloured crinkled paper-crimson is the most effective. Having



ade the window scrupulously clean and polished all pparatus, such as scales, weights, measures, and mortars, over the window-base with the paper.

Now, take your books and lay them (two on each side)
the window-base. The space between is required for
the first talking card, which must be large in proportion
the others. On it print your invitation to the public.

We solicit your prescriptions n either side of this card place a smaller onc, worded No prescription too old to be traced.

he other:

All prescriptions registered by our Modern Index-system. n each set of the books place a small card worded:

"Duplicates of all prescriptions for the past — years." he books should be opened at pages where addresses are t given. On a higher level, but also on the window-base, paratus should be arranged with a distinctive little card paratus should be arranged with a distinctive little card ached to each article, and, where practicable, a specimen the work it accomplishes—e.g., a measure 4 or 8 oz. keted "Government stamped measure for liquids." eights.—"Government stamped weights for weighing sids." A set of dispensing-scales if you can spare them. powder-folder, ticketed "Powder-folder," with a dozen ded papers close by. A mortar, ticketed "Mortar for paring pills," with varnished pills alongside. So on, fortill standard papers to be a paperatus you have at hand. On the first shelf place a B.P., "The Art of Dispensing." Jow, neatly distribute on the same shelf coloured solutins, filtered and scrupulously elean. These to be Ir belled a mixtures, draughts, lotions, etc., and to be of varying sis. The card on this shelf (one at each side) is to be wided thus:

w ded thus:

b guarantee prescription ingredients dispensed absolutely untouched by hand.

his card is of extreme value in a good-class locality. second shelf may be profitably used to display crude

drugs-e.g., roots, leaves, barks, and flowers-each bearing the name of the article. On the same shelf put a microscope (if you have one), lens, etc., and mark, "Scientific instruments for ascertaining purity before placing into stock." In the front of the shelf put a card bearing the words, "Vegetable Medicines."

The next shelf should contain bismuth, soda mag. s.lph., etc., with test-tubes, flasks, burette, etc., on the same principle as the previous shelf, with, in the foreground, "Mineral medicines."

The last shelf is to exhibit all varieties of packages, bottles, boxes, etc., wrapped in paper ready for delivery, interspersed by artificial flowers. The card for this shelf:

### Your Medicines, the result of our scientific knowledge and skill.

This window was originally designed for a West-end business, but it is equally useful for a working-class locality. ness, but it is equally useful for a working-class locality. Other cards stuck here and there may be used at the discretion of the window-dresser, such as "Purity guaranteed," "Accuracy guaranteed," "Prompt delivery," "Qualified supervision," "Thorough checking system," and so on. The arrangement must necessarily be regulated by the size and style of window. Two Allied flags, used as a background, well-as a protein a present make a patriotic appeal.



### A Professional Window.

This window-arrangement contained nothing but show-cards. The scheme was somewhat classy, and consisted of marble pillars (paper), shaded to give the necessary round-"stonework" bearing the words, "Free medicines for insured persons dispensed here" in white letters on brown panels. The Minor examination certificate framed in oak was placed in a prominent position, and showcards on cach side read:

"If you want personal attention, you get it here."
"If you want the best drugs in your prescriptions, you get them here.

The three bottom showcards were lettered as follows:
"We carry out the doctor's instructions in preparing your prescriptions.

"This certificate is a proof that the holder has all the scientific knowledge and ability to dispense all prescriptions entrusted to his care."

"Our reputation is at stake in supplying you with the

All these showcards were lettered in black on a white panel raised on a rich green board. Note the brown panels on the marble base with name and qualification on them. The top strip in black and white ("Prescriptions accurately dispensed") was pasted on the outside of the window.—H. A. Martin, Leicester.

White Pepper.

By Maurice S. Salamon, B.Sc., F.C.S., and
William M. Seaber, B.Sc., F.I.C., F.C.S.

SAMPLES of "ground white pepper" which we have examined, although showing no evidence of the addition of pepper-shells, had fibre contents of not more than 7 or 8 per cent. The present lack of any precise definition of white pepper makes it very difficult for an analyst to decide whether such samples should be passed as "genuine white pepper." described as white peppercorns have fulfilled this con-The following figures are typical of the perdition. centages of fibre in samples described as "whole white pepper" from various sources:

Crude Fibre	Crude Fibre
per cent.	per cent.
Penang (limed) 5.5	Muntock 4.2
Penang (unlimed) 4.9	Muntock 3.5
Singapore 4.2	Siam, decorticated
Singapore 4.4	in London 1.5

The samples of Penang are the only ones that approach or exceed 5 per cent. fibre. Neither of these could, in

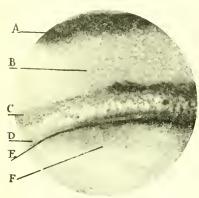
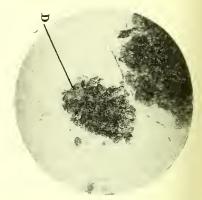






Fig. 2.



Some authorities contend that anything that by trade custom has become known as white pepper fairly deserves that name, and they recommend a fibre limit of 9 or 10 per cent. in order to include all such samples. We think, however, that the best way to approach the question of the fixing of any standard is to inquire what the purchaser understands by white pepper, for it is evident that he may be quite ignorant of trade custom, and that the trade custom may be to his prejudice.

The fact that one can purchase from any good grocer both black peppercorns and white peppercorns shows that the public distinguish clearly between these two; in our opinion, reasonably have been sold as whole white pepper. The unlimed one was very dark in colour, and both had evidently been very imperfectly decorticated, for a fair proportion of the peppercorns had fragments of the outer pericarp adhering to them, especially the limed one.

We prepared a sample from the unlimed Penang by rejecting all such insufficiently decorticated berries, and estimated the fibre on this. Also we sent the limed sample to be ground by a firm who always remove a fair proportion of "gruffs" from a pepper of this kind in order to get what they consider to be a fair sample



Fig. 4

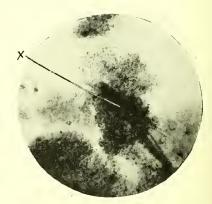


Fig. 5.

fact, it is extremely probable that the average housewife thinks that they come from different plants. This appears to us to give some foundation for assuming that by "ground white pepper" the public understand "white peppercorns, ground." Hence it seems to us that the fixing of a standard for whole white pepper is a necessary preliminary to the fixing of a standard for the ground article.

In order to produce a whole peppercorn that shall be white or approaching white in colour it is found that at least the outer pericarp must be removed, and all the samples we have examined which could be

of white pepper, and we estimated the fibre on this ground sample. The following results were obtained: Crude Fibre

4.0 per cent. Limed Penang (ground commercially) Penang (outer pericarp all Unlimed removed) . . . . . .

It will be seen that in the first case there is a drop from 5.5 to 4.0, and in the second case from 4.9 to 4.6. In the latter case the peppercorns left were still very dark in colour, and further decortication would be necessary in order to prepare a reasonable ground white pepper. We give herewith some figures upon commercial blended ground white peppers from known source, which were examined at the same time:

1.	(This w	as no	t of	very	good	colour)	Crude Fibre 3.2 per cent.
2.							 2.6 ,,
4.							2.6 ,, 3.0 ,,
5.	("Best	white	e ")				 1.0 ,,

These were all ground from home-decorticated samples, and the decortication had been carried further than is the case with the so-called "imported white peppers." The accompanying photomicrographs serve as illustrations in connection with decortication.

Fig. 1 shows the general structure of the outside por-

tion of a whole berry.

The pericarp proper extends from A to D, the layer A being made up of the epidermis and the characteristic heavy "stone cells" (sclerenchyma) shown in the surface view in fig. 2, and the layer p being the lighter

stone cells shown in the centre of fig. 3.

Layer E represents the seed-coats (testa), and a surface view of this portion is shown in fig. 4. F is the seed-tissue (perisperm). It will be seen that the pericarp shows two inner layers, B and C, and it is at the junction of these two that a point of specially easy severance occurs, and most of the "imported white peppers" have been decorticated up to this point—i.e.. the outer portions A and B of the pericarp have been removed, except in those cases where they have evidently been left on accidentally. With some varieties (e.g., Muntock) this removal results in a white-looking peppercorn, although the inner pericarp and the testa are left on; but with other varieties (e.g., Penang) the peppercorns are dark in colour, and could hardly be sold as whole white pepper. However, if decortication is carried further, and the inner pericarp and testa (c, D, and E) are removed, then a white-looking peppercorn is produced, and the product could certainly be sold as whole white pepper.

### Heart-tonics:

### A Retrospective Study of their Physiological Standardisation.

By E. Hercod, Pharmacien,

### PART I.

A CRITICAL glance through the various Pharmacopæias shows that, whereas they practically all prescribe a fixed standard in active principles for certain heroic vegetable drugs and the galenical preparations derived from them, they only specify inadequate control tests of a purely qualitative nature for the important class of heart-tonics, comprising digitalis and strophanthus. This fact is all the more striking, seeing that as far back as 1897 Houghton drew attention to the variability of certain vegetable drugs, while Keller found differences of 0.26-0.62 per cent, in the content of digitoxin in digitalis-leaves. Three years later Bührer established that the toxicity of digitalis extracts of different origin varied in the proportion of 400 pcr cent., and Ziegenbein n 1902 found that digitalis-leaves showed differences f activity varying from 100 to 200 per cent., while, finally, Fraenkel reported variations of 100 to 275 per cent. in infusions and of 100 to 400 per cent. in ligitalis tinctures. When Schmiedeberg, Böhm, and Kiliani had successfully isolated from the dioitalis-leaf hree distinct glucosides—digitoxin, digitalein, and ligitophyllin—Keller thought that the therapeutic value of this drug could be fixed on the basis of its content f digitoxin, this glucoside being the principle of which he physiological action most resembles that of digitalis. However, Freund and Ziegenbein, after having studied he comparative action of digitalis and digitoxin on rogs, according to a method similar to that of Houghton, proved that the physiological action of digitalis infusion s stronger than that of the digitoxin contained in this nfusion, and that consequently, there was no relation etween the activity of digitalis and its content of

digitoxin. Freund established that 0.02 gram digitalisleaf containing 0.25 per cent. digitoxin (i.e., 0.00005 digitoxin) kills a frog in half an hour. On then administering pure digitoxin to frogs of the same weight, he found that he had to administer 0.0005 to cause death: in other words, digitoxin would be ten times more toxic if administered in the form of leaves than in the form of pure glucoside.

At a later period Fromme and Focke also concluded that the chemical standardisation by digitoxin proposed by Keller was unreliable, as it gives quite a false idea of the physiological activity of the plant. To establish this point, Ziegenbein made a scries of experiments, which I have summed up in the table below. The

toxic doses are for 100-gram frog.

Toxic Dose of Digitalis-leaf	Containing per cent. of Digitoxin	Quantity of Digitoxin con- t uned in Toxic Dose of Leaves	Toxic Dose of pure Digitoxin (isolated glucoside)	Relation of Toxic Doses between Digi- toxin in leaf and isolated Digitoxin
0.04	0.14%	0.000056	0.00028	1:5
0.03	0.18%	0.000054	0.00018	1:3.3
0.03	0.12%	0.000036	0.00024	1:6.6
0.05	0.11%	0.000055	0.00022	1:4
0.06	0.22%	0.000132	0.00036	1:2.6
0.05	0.18%	0.00009	0.00036	1:4

This table shows that the toxicity of the digitoxin con tained in the digitalis-leaf is from 2.6 to 6.6 times stronger than that of pure digitoxin. According to certain authors, this greater toxicity would be due to complex substances contained in digitalis, which play the part of physiological catalytics by stimulating the absorption of the active principles of the drug by the organism.

Investigating the cause for the variability of digitalis preparations, Ziegenbein, Focke, and others discovered that these are due to various factors, among which I

may mention:

1. The age, or rather the period of growth, at which the plant is gathered Focke has, in fact, found that the toxicity of the two-year-old plant, gathered at the beginning of July (the period of efflorescence) is from 15 to 20 per cent, higher than that of the one-year-old plant, gathered at the same time and the same place, while at the beginning of August the proportion is reversed; this gathered at the same time and the same place, while at the beginning of August the proportion is reversed; this is explained by the fact that the one-year-old plant does not bloom until August, at which period the two-year-old plant is forming seeds. In a word, the maximum toxicity coincides with the apogee of the efflorescence.

2. The climatic conditions which prevail during the development of the plant. The digitalis which develops in hot and dry weather is much more active than that which develops in cold and wet weather.

3. Finally, the mode of preservation which constitutes

3. Finally, the mode of preservation, which constitutes, if not the most important, at least one of the principal factors in the variability of the drug. Thus Focke was able to establish that the therapeutic activity of digitalis dried in the open air by the ordinary process undergoes a retrogression proportional, in a certain degree, to the age of the plant. The following figures give an idea of the importance of this retrogression:

Within the space of Diminition of Activity

Within the space of Diminution of Activity - 34 per cent. ... 41 ... ... 76 ,, 5 weeks ... ... 3 months...

This loss in activity is attributed either to ferments. or to the humidity which remains in the leaf or which it absorbs after desiccation; these factors, which do not appear to affect the glucosides themselves, would, on the other hand, affect certain principles to the presence of which digitoxin seems to owe its solubility. We know, as a matter of fact, that alkaloids and glucosides are not present in the basic state in living vegetables; they are in the form of complex combinations, soluble in water, which the humidity or the ferments remaining in the plants after desiccation would decompose into simpler, insoluble radicals.

It is therefore important to dry the digitalis-leaf as rapidly and thoroughly as possible after gathering; the desiccation can take place in the open (Wolf) or by artificial heat (Focke), ensuring, however, that the heat does not attain 100° C. The operation should be

prolonged until the contents in water do not exceed 1.5 per cent. Perrot-Goris have recently proposed a method of desiccation by alcohol-steam, which would have the

advantage of destroying the oxydases.

Strophanthus preparations, like digitalis, present considerable variations. Houghton, having had occasion to analyse fourteen samples of strophanthus-seeds, found that their activity varied from 100 to 330 per cent. Fraenkel, studying the comparative activity of seven strophanthus tinctures of German origin, reported differences in these of from 400 to 6,000 per cent. These differences must be attributed to the fact that in Europe there are obtainable, under the name of strophanthus, seeds which belong to all the varieties of the plant, so that, as Dr. Gilg so justly says, "it is very rarely that one obtains, even from important export houses, samples of Strophanthus Kombé, the sole kind that is official, and," he adds, "seeing that the physiological activity of the various kinds of strophanthus varies enormously, it is clear that the effect of the medicament on the patient depends exclusively on the absolute purity of the crude material.'

It must be added that the anatomical study of the seeds of the different kinds of strophanthus is most difficult, as, apart from a certain number of characteristic species, they cannot be differentiated under the microscope. This variability in action is also to be found in the different strophanthins sold on the market. Houghton reports having analysed six samples, said to be pure, and which gave the following results:

Strophanthin		Minimum			Strophanthin			Minimum	
-			Lethal Dose					Lethal Dose	
1			0.000009		4			0.00000062	
2			0.000001	- 1	5			0.0000001	
3			0.000001	ļ	6			0.00000001	

These strophanthins, which had been supplied by three of the first manufacturers of pharmaceutical products in the world, were, as said before, so-called pure, in spite of which we see that one sample is ninety times more active than another.

Professor Thoms writes, on the other hand, on the subject of various strophanthins examined by him: "The products sent me by various firms were, without exception, amorphous; they possessed different chemical proporties and—what is of great importance from a therapeutic point of view—they varied in their toxicity; some of them had an acid reaction, and the majority contained a different quantity of nitrogen.

It is obvious that under these conditions one cannot establish the therapeutic value of strophanthus preparations according to their contents in a glucoside which is not always identical.

In the second part of this communication the different physiological-testing methods for such heart-tonics will be dealt with.



Rue du Commerce, Soissons.

This is how it looked after the bombardment, which also destroyed a pharmacy of which the door is seen on the left.

### Official Galenicals.

Notes for Students on the Methods of Manufacture. By H. F. Slack, Ph.C.

(Laboratories of the Standard Tablet and Pill Co., Ltd.)

THE difficulties which arise in the manipulation involved in the manufacture of pharmacopæial preparations on a small scale are not without educative value to those preparing for the Qualifying examination in pharmacy. Many operations involve principles which are of general application, and the present notes are the result of experience gained in working on large and small scales, combined with recollection of the difficulties encountered by the writer in his pre-examination days.

### General Counsel.

For examination-purposes the manner of working, choice of the most suitable apparatus required, and the rationale of the process adopted are quite as important to the examiners as the elegance of the finished product. When commencing a pharmaceutical manufacturing operation, with which a mayber is not familiar the first billion that tion with which a worker is not familiar the first thing he should think about is the kind of apparatus required for the various stages; he must be careful that the appliances selected are suited to the different conditions, particularly the temperatures involved, as these considerations always minimise possibility of accidents and loss of material caused by breaking of unsuitable apparatus, and such avoidable operations as transferring the contents of one vessel to another on account of the container chosen proving in the course of operations to be unsuitable. The Pharma copæia directions in the galenical monographs should be read with the greatest care so as to get all possible information from them, for omission to observe even details often spells "failure.

As an example of a frequent cause of misdirected thought and loss of time may be mentioned the difficulty of intro-ducing into a preparation a minute fraction of the smallest weighable amount of an ingredient without having to employ some inert foreign substance as a diluent or triturant. In such a case a component of the galenical being prepared may serve as the dividing material. For example, the sugar in syrup, ferri phosph. c. quininâ et strychninâ is a suitable triturant for an awkward amount of strychnine; an equal quantity of the diluent being omitted from the

weight of sugar to be added to complete the syrup.

The incorporation into a preparation of a substance requiring merely admixture with the basis is often facilitated by making a minimum excess of the galenical and preparing a trituration or dilution of the particular substance with some or the whole of the excess allowed; this means may be employed, for instance, in the addition of the otto of rose to ung. aque rose, when the volume of the otto does not admit of convenient direct measurement.

Very frequently, when a small amount of a galenical has to be manufactured, the calculated proportions of its ingredients are inconvenient quantities for weighing or measuring; in cases of this sort it is usually permissible to make a small excess of the preparation, so that the quantities prescribed by the Pharmacopeia may be taken in terms of a set unit; an ounce, for instance, as prescribed in an official monograph, may be taken to correspond with a drachm or other convenient amount, and the other a dracin or other convenient amount, and the weights or volumes calculated in proportion. It should be noted also that frequently, as in ung paraffini, the prescribed amounts are simple multiples of one another; in such cases it is obviously unnecessary to work out elaborate. calculations for producing a particular amount. In calculation it is of considerable value to be conversant with the more common equivalents of the Imperial and metric

Although practical experience is the best and surest guide

to details of manipulation, of the numerous hints which it is possible to suggest the following may be of use:

When a semi-solid or sticky substance, like many of the extracts, is required to be dropped into a bottle or flask without clinging around the neck, it is often expedient to twist up the substance in a small piece of parchment or waxed paper and drop the whole into the vessel. For introducing powders a perfectly dry long or short stemmed funnel, as occasion requires, may be used, and the traces of adhering matter washed into the container by means of some of the solvent or medium in the container by means of

some of the solvent or medium in use.

When a small weight or volume is required of a thick liquid unsuited for direct measurement it is often continued. venient to know the number of drops from a particular container which are necessary to produce a definite quantity in minims or grains. Small weights of liquids—for example, glycerin—which cannot be obtained accurately by simple weighing, owing to their adhering to the scale-pan, may be got by difference, a slight excess of the required quantity being weighed first and the requisite amount being poured off in drops, the approximate number of which is regulated by calculation from the results of a previous experiment carried out as above suggested.

The conveniences above referred to are mentioned only

in order to stimulate operators to thought when difficult and apparently insurmountable circumstances arise, and to indicate that, whatever the conditions may be, there are right and wrong ways of attaining the desired result, also

a best way.

#### Principles Illustrated in Preparations.

The following order of operations should be systematically

adopted on setting out to manufacture a galenical:

1. Study with care the formula and official directions, so that the preparation may be made unhesitatingly and as expeditiously as possible, also in order to extract the maximum amount of information from the particulars stated therein.

2. Decide upon convenient quantities, methods of dilution or trituration of awkward amounts, and general

manipulatory details.

3. Calculate so that the resultant amount be sufficient, if permissible, to allow for any unavoidable loss.

4. Prepare for use the apparatus required, employing only the minimum number of appliances.

Representative preparations and classes of vihich merit attention are here treated in alphabetical order:

Acida Diluta. - In preparing dilute acids as much care should be taken as when making volumetric solutions, which implies that a graduated flask, or other vessel with the desired volume marked on the neck or other constricted portion, should be employed. Allowance should be made for changes of temperature that occur when strong acids are mixed with diluents, sufficient time being allowed for normal conditions to be regained before the volume is made up to the graduation mark.

Adeps Lance Hydrosus.-Rapid incorporation of the water is facilitated by first melting the wool-fat and by working with a warmed mortar.

Alum Exsiccatum.—To prevent loss of the acidic radicle of alum, and so obtain the resulting dry compound completely soluble in water, the heat should be carefully regulated and the temperature not allowed to rise above 200° C.

Caffeinæ Citras Effervescens.—Granulation is aided by employing a vessel well suited for the purpose—e.g., a photographic dish. It is necessary also to pay strict attenion to the officially prescribed range of temperature.

Collodia.—It is often advisable, in order to effect quick clubility of a soluble medicament in collodion, to dissolve olublity of a soluble medicament in collodion, to dissolve he substance in a suitable mixture of ether and alcohol pefore mixing it with the thick collodion. This is quite asy when a collodion of lower (often three-quarters) trength is ordered, whereas in other cases, when sufficient ime is at disposal to allow any suspended particles of partly nitrated cellulose to deposit, pyroxylin may be disolved in the solution of the medicament in the ether-leohol mixture. It should be observed that, as pyroxylin a usually preserved in a damp state, moistened with s usually preserved in a damp state, moistened with ethylated spirit, it is necessary to dry it before use, preerably at air temperature.

Confectio Sulphuris .- Care must be taken that the cagacanth is perfectly mixed with the other powders before

ne liquids are added.

Decocta. -It is important not to use an iron or tinnedon vessel for preparing decoctions of drugs which contain nnin. An aluminium saucepan is quite suitable, and should loosely covered during the operation. When dispensing coctions use a "shake" label, as mixtures containing arm usually deposit a sediment.

Emplastra.—When calculating quantities for making afficient plaster to be spread over a definite area make lowance for waste. Each square inch of surface requires gr. of emp. belladonnæ, 12 gr. of emp. plumbi, and gr. of emp. hydrarg.

Emp. Ammoniacic. Hydrarg.—As in most preparations mercury, it is difficult to obtain the exact amount of ercury required by direct weighing. The best way out of e difficulty is to take a quantity of the metal slightly in cess of requirements and adjust the weights of the other gredients in proportion to the amount of mercury taken. Emp. Menthol. -In order to avoid long exposure to heat duce the menthol to a coarse powder before adding it the melted wax and resin. Strict adherence to the official

temperatures must be observed; also pour and spread quickly, as the plaster is almost solid at 70° C.

Emp. Plumbl.—Boil the ingredients until a portion of the plaster, cooled and kneaded between the fingers, does not feel sticky. The kneading with water before "pulling" is to remove glycerin.

Emp. Resinæ.—The official directions, which state that each ingredient must be melted separately, are somewhat misleading in view of the difficulty experienced when endeavouring to melt the hard soap. The resin should be melted first over a Bunsen flame, strained if necessary, and the soap added in very fine shavings. The heating is then continued with stirring until the soap suddenly disintegrates and dissolves, and to this mixture is added the melted lead plaster. A similar manner of manipulation applies to emp saponis.

Glycerin. Acid. Boric.—Noto that crystallised acid is used. Stirring must be very assiduous, especially if the heating be conducted over a direct flame, otherwise darken-

ing in colour is likely to result.

Glycerin. Acid. Tannic.—An elegant light-coloured preparation is obtained when the directions given in the British Pharmacopæia, 1898, are followed, but complete solution is not effected until the mixture has been allowed to stand for some time with occasional stirring or shaking. Should the preparation be required quickly, however, warmth must be applied, although this gives a preparation considerably darker in colour, as is also the case when the glycerin used contains a trace of iron as impurity.

Glyceria. Aluminis.-The best result is obtained when Gyceria. Alumins.—The best result is obtained when crystallised alum, preferably the ammonium compound, is used and freshly powdered in a composition mortar. The small amount of water ordered is sufficient to dissolve the salt on the application of heat. The solution thus formed is then poured into the glycerin and any suspended matter removed by straining through fine muslin. The same hint as to the use of crystalline chemicals has wide application, and may be adopted when making up preparations containing boric acid, borax, and sugar (as in syrups).

Glyceria. Amyli. - The starch should be mixed with the water first, thus avoiding the formation of lumps. Heat the ingredients on a sand-bath and continue with diligent stirring until a translucent jelly is obtained. To avoid charring the preparation it is also advisable to remove the vessel from the sand-bath just before the starch has become completely gelatinised.

Infusa.—Carelessness as regards the observance of the time of infusion frequently occurs, although in order to obtain products of standard and correct composition it is most important that the officially directed lengths of time most important that the officially directed lengths of time be rigidly adhered to, so as to obtain infusions containing the proper amount of extractive. The requisite amount of water may be either weighed, as is usually done, or measured in a graduated earthenware jug. It is customary to cover the infusion-pot employed with a tea-cosy, or fo adopt other means for retaining heat by preventing excessive radiation, and finally to strain the resultant liquid through a small piece of cotton-wool.

Inf. Aurant. Co.-The fresh lemon-peel in this infusion and in inf. gentian, co. is best obtained by removing the rind of the fruit in large pieces, after having made longitudinal slits; these pieces are then well scraped with a knife to remove the inner white zest, which possesses no aroma and contains tannin. The presence of the latter in the finished preparation is often undesirable, because of possible incompatibility with other ingredients of mixtures.

Inf. Sennæ.—The ginger is ordered to be slice powdered drug would result in a cloudy preparation.

Injectiones Hypodermica.-When making a solution for hypodermic injection, it is advisable, for convenience and quickness, to have at hand a good supply of boiling distilled water for the purpose of sterilising all the apparatus and containers in use; also a sufficient volume of boiled and rapidly cooled water for use in the actual preparation of the solution. The water for sterilisation-purposes should be boiled in a perfectly clean glass flask, the neck of which is lessely plugged with cotton-world to the neck of which is loosely plugged with cotton-wool to prevent external contamination. All the appliances used, such as measures, stirring-rods, funnels, filtering-media, bottles, corks, etc., should be treated immediately before use with the boiling water.

Inj. Morphin. Hypoderm.-Morphine tartrate frequently contains a small amount of insoluble acid tartrate. This should be ascertained, and, if present, the salt must be either exactly neutralised or recrystallised, so as to get a clear solution.

(To be continued.)

# Nigerian Impressions.

By R. C. Wren, F.L.S.

M Y visit to the West Coast of Africa (C. & D., 1915, 11., 675) was of necessity a short one, and I did not come back qualified either to write a book or give a lecture on the subject, but there is no doubt about the

value of personal experience as against book knowledge. During my stay I interviewed all sorts of people-Government officials, English doctors, native doctors, chemists, and native herb - doctorsand from all sides, black and white, trader and professional, I was accorded the utmost courtesy and hospitality, and thus gained quite an extensive fund of information. I interviewed three English doctors in Lagos, one of whom has a dispensary and large practice, and two are Government doc-

tors. The large trading firms contract with one or two practitioners to look after the medical needs of their employés, while the Colonial Hospital, whose medical officer is Dr. Parkinson (I had

E. H. Caulcrick. Owing to the war none of them possessed what might be called complete stocks of all drugs and patent medicines required. Ships are less frequent at the port, and many consignments are held up at Liverpool owing to overcrowding of cargo. The reply to a request for a particular article is too often, "It is finished," or the assistant will say, "English Massa come one time this morning and take it all." Cargoes to and

from the West Coast are likely to be fewer rather than the opposite during the war, owing to the calls on the shipping companies made by the military authorities. Nearly every ship out carries soldiers and munitions of war for the Came-roon campaign, which is being carried out with absolute tho-roughness. Owing to difficulties both of import and export (the German boats have ceased runn i n g, a n d French boats are extremely scarce), native produce is fetching small prices,



ON THE RIVER OGUN. IBADAN.

or cannot be sold at all, and trade is suffering severely in consequence. This is a state of things which must naturally last until normal conditions are once more established.



CARRYING SUGAR-CANE ON THE LUGOS MARINA.

the pleasure of meeting him going out in the s.s. Karina), generally meets the necessities of the Government class. There are three chemists' shops in Lagos owned by natives, the leading store being that of Mr.



BANANAS AND COTTON, IBADAN.

In Sierra Leone there are native drug-stores, but of a very poor type, and as far as I could ascertain such stores are few and far between all along the coast. Business in patent medicines and perfumes is done by the

large traders, but no attempt appears to be made to set up a regular chemist's business such as we know in England. Mr. E. M. Holmes suggested that while I was out in Nigeria I might see whether the Government were doing anything in the way of experimental work in the



ENGLISH CHURCH, FREETOWN, SIERRA LEONE,

roduction of botanical drugs, so I obtained introducons from the Secretariat at Lagos to the officers in narge of the Moore plantations at Ibadan, one of the rgest towns in the Colony. Here, owing to the kindly flices of a friend in Lagos, I was most hospitably received ad cared for by Mr. MacDonald, the local agent of filler Bros. In their bungalow, pleasantly situated in spacious compound full of crotons and other flowering



A BANANA PLANTATION, IBADAN.

tes and shrubs, I found the most pleasant of quarters; if fact, kindness and help for a stranger, if not out to dopposition trade, seems to be the happy rule in these pts. Mr. Farquharson, the mycologist at the Moore

plantations, met the train, having cycled four miles to do so, and offered me a bed on his verandah, but as I had already fixed things up with Mr. MacDonald, I could only decline the offer. From the damp heat and heavy



YAMS, THE NATIVE POTATO.

rains of Lagos, Ibadan came as a welcome change, though it was truly hot enough, and after a full day's tramp around the plantations I was pretty well used up and glad to rest most of the second day's stay there. It was



WOMEN CARRYING GOODS ON THEIR HEADS.

on Thursday, September 23, that I was motored the four miles to the Government trial-grounds. There I met Mr. Bell, the Curator, who took me in charge up till "chop" time, when I met Mr. Farquharson again, and the three

of us tramped over the portion I had not already seen. The principal work done in the plantations is in connection with agriculture, and attention is primarily given to things which the native can cultivate to advantage. The crops grown on a large scale here are as follows: Cotton (American and native varieties); cocoa, Amclanado and Criollo (red and yellow podded varieties); coffee, Abeokuta (Arabian and Liberian varieties) and Bengaliensis; rubber, Para and Ceara; maize, Lagos white (dent and flint varieties) and American white; Guinea corn; native groundnuts, Chinese yoniba, Hausa, Gambia, and Zaria; legumes, various native varieties; kola, Gbanga and Abata varieties. Lectures are given in various parts of the country on the cultivation and harvesting of these staple products, and plants are distributed or sold and advice given to farmers who are already growing them. In this way the Government is doing immense service in improving the resources of this wonderfully prolific country. One effect of their efforts may be seen in the tremendously increased output of cocoa from the West From the Ibadan district alone 3,000 tons is Coast. annually exported.

All this was interesting enough; but I wanted to see some drugs among the trees and shrubs, but I was to some extent disappointed. The drugs are few, and they are all in the nursery or experimental stage. there is the nucleus of possible great things, and I am going to send out seeds and one or two suggestions which may further enlarge the scope of operations. The soil is so rich that it should be easy to produce many of our well-known remedies. The deciding factors will be the climate and the cost of freight to destination. No serious effort has been made to produce drugs, and the only plant which is well on in the experiment stage is the Truxillo variety of coca. A small plantation of this looked beautifully fresh and green, and the plants were nearly full grown. Vanilla, cinnamon, cassia, various peppers, castor-oil plant, areca, and various kolas are growing in small nursery plots. The castor-oil plant grows wild, but the seeds do not appear to be collected for the oil. The native boils them with other things and takes the decoction as a purgative. Strophanthus also grows wild in this country, and I suggested that it would pay to cultivate it, as genuine seed s so difficult to procure in England. I also asked Mr. Farquharson to make an experiment in collecting the stigmata of the maize, which article is always in demand and has been obtained from Germany in the past. There were many other interesting trees, such as the banana in full fruit, pineapples just ripening, the coconut palm, and the silk cotton (Eriodendron anfructuosum). The last-named is analogous if not identical with the kapuktree of Java, which produces the article of that name used in the making of life-saving belts, cushions, etc. Before completing our circuit we went down to the River Ogun, which forms part of the boundary of the plantation, and obtained a characteristic and charming view of tropical vegetation and river scenery. Just now there is plenty of water, but in a month or two the bed of the river will be little more than a succession of pools.

The next morning I should have seen Mr. Johnson, F.L.S., Director of Agriculture, and perhaps the best authority to-day on the botany and flora of Nigeria. He was in residence at the Secretariat at Ibadan, but it was four miles away, and in the morning I was due to go back to Lagos. On the train back Dr. Laurie, one of the Government sanitary officials, was on his way south to inquire into a case of yellow fever, and he invited me into his special car, where I had a nice lunch, a look at some mosquitoes' eggs, a talk about English plants likely to grow on the coast, and a most interesting general chat, which served to while away most pleasantly an otherwise long and tedious journey.

# Minor Experiences.

Orion II. (148/69) gives the following account of the London examination: I duly received notice to attend at Galen Place and, after the usual preliminaries, was sent to Chemistry, where I had the following paper:

I. You are required to estimate the sample of liq. arsenicalis and report whether it has been prepared to B.P. strength. N/10 iodine solution provided.

II. Analyse powder No. 17.

The "salt" I found to contain sodium, calcium, sulphate, and arsenate.

DISPENSING in the afternoon was as follows:

Make six suppos. acid. tannic., B.P.,
Send mist. ferri co., B.P., 250 c.c.

	Acid. carbol.						gr. x.
	Pulv. amyli						31V.
	Glycerini						ziv.
	Aq. dest	• • •					ξiij.
Ft.	. applic. sec. art	. M.:	D.U.				
	Acid. arseniosi						gr. ,1
	Ext. casc. sag.						
	Pil. ferri	* - *	* * *		***		gr. iij
Ft.	. pil. Mitte xxiv	. Va	rnish.	j.	t.d.s.	p.c.	
	Syr. tolutani.						
	Syr. pruni virg	c. aa.					mxx.
	Codein. phosph.						gr. 15
	Aq. chlorof. ad						
Et.	linet. Mitte 5ij						
~ 00	111001 211000 191						

The following day I was asked to attend for theory five days later, and was first sent to

PRESCRIPTION-READING.—Here I was given a dozen prescriptions to read and the following calculation to work out: Express in metric terms the amount of strychnine in 10 minims of tr. nuc. vom. Several doses were asked. Chemistry.—I was shown labelled bottles containing re-

Chemistey.—I was shown labelled bottles containing respectively bismuth oxide, amylum, iron wire, sodii sulphocarbol., ammon. earb., salol, borax, hydrogen peroxide, ammon. brom., and ammon. phosph. The following are some of the questions asked: How would you prepare bismuth oxide from the metal and bismuth from the oxide? What is sodii sulphocarb. chemically, and how made? Formula? How is starch prepared, and how obtain alco hol from it? How is iron extracted from the ore, and how estimate the purity of wire shown? What is a normal solution and an equivalent weight? What fraction of the molecular weight of KMnO<sub>4</sub> is required to make a N/7 solution? How prepare ammonium carbonate, and what constitutes the official salt? Give formula for ammonium carbamate? How would you prepare ammonium bromide from pure bromine and ammonium phosphate from phosphorus? Give formulæ for the three phosphates of sodium which are obtained by neutralising H<sub>3</sub>PO<sub>4</sub> with NaOH. What is salol? How would you prepare salicylic acid? Give formula. Preparation of H<sub>2</sub>O<sub>2</sub>? What does "10 volumes" mean? How is H<sub>2</sub>O<sub>2</sub> estimated?

MATERIA MEDICA.—Specimens shown: Jalap, false jalap, hemlock, cherry-laurel leaves, digitalis-leaves, aconite-root, sandarac, mastich, manna, myrrh, turmeric, squills, chondrus crispus, and tragacanth. The natural orders of several of the above were required, and sources of manna and myrrh. Constituents of jalap and how extract the resin? Constituents of aconite? Dose of aconitine? Constituents of digitalis? What are the spots on cherry-laurel leaves? Does HCN pre-exist in them? How are sandarac and mastich obtained? What is manna? To what is the odour of myrrh due? Percentage of gum in myrrh? Constituents of squills, Irish moss, and tragacanth?

Stituents of squills, Irish moss, and tragacanth?

Pharmacy.—I was asked to write down all the official preparations of opium I knew. State which come under Part I. of the Poison Schedule. Describe the official assay process for opium. Enumerate the poisons of Part I. of the Schedule, with laws governing their sale. Give the Schedule, with laws governing their sale. Give the solubilities in water of phenol, sod. bicarb., and potassium chlorate. Give the B.P. processes for making tinetures, with examples. How would you make tr. aurant. and tr. quin. ammon.? What are the peculiarities about them? What is calcination? Give B.P. example! Give constituents of pulv. rhei co. How make light and heavy magnesia respectively? How is pulv. ipecac. co. made? Percentage of morphine present? Constituents of p. opii co. and p. glycyrrh. co.? Give B.P. preparations of iodoform and ergot, with strengths. Strengths of all the official injections? How make glyc. pepsin., glyc. amyli, and glyc. acid. boric.? How make liq. hamamelidis? Finally, some apparatus was shown which I had to describe.

Botany.—The following questions were asked: How many

BOTANY.—The following questions were asked: How many stamens in Liliaceæ, Ranunculaceæ, Solanaceæ, Compositæ, and Rosaceæ? Give position of ovary in each? What are the functions of xylem and of phloem? Explain the synthesis of endosperm and give the conditions for carbon assimilation. What are lenticels and what is their function? I was then shown three slides illustrating sections of a monocotyledonous root, selaginella, and a pine-leaf. Finally, I had to give the English names of a number of plants.

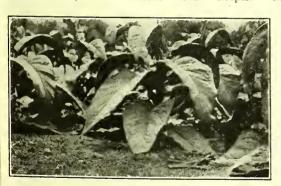
This concluded my examination, and in a few minutes I received the President's congratulations.



THE history of tobacco and the date of its introduction into England are matters of speculation. It is generally supposed to have been imported first between 1660 and 1665 by Sir Walter Raleigh and Mr. John Lane, the Governor of Virginia at that time. It suffices to say that its use rapidly increased in popularity, in spite of

A gentleman called King James, In quilted doublet and great trunk breeches, Who held in abhorrence tobacco and witches.

He was responsible for a "Counterblaste" to tobacco, and also raised the duty to 6s. 10d. per lb. from the 2d. per lb. of Queen Elizabeth's time. Both measures were equally without the desired effect. Like many other new substances introduced in the Middle Ages, and indeed not absent from modern ones, its medicinal virtues were enormously exaggerated until it was considered a panacea for all ills. Gerarde's "Herbal" (1636) describes it under Tobacco, or the Henbane of Peru, and adds a list of diseases, from "Colicke" and "Dropsie" to



VIRGINIA PLANTS FULL GROWN.

eafness and scabs, for all of which it is a cure. To-day, s every pharmacist knows, it has fallen into complete esuetude as a drug.

Tobacco consists of three varieties: Nicotiana Tabacum, rst found in America and extensively cultivated there; icotiana rustica, a variety cultivated in Turkey and ne Levant, suitable for cigarettes, but, owing to the resence of a greater percentage of nitrates, it burns too uickly for pipe-smoking; Nicotiana persica, a variety rown to some extent in Persia, but not a commercial rticle.

The growth of tobacco in the Eastern States of America enormous, and every possible scientific aid to its accessful cultivation is freely employed. Briefly, the

method adopted is as follows: In March or April the seeds are sown in hotbeds, and after seven or eight weeks the sturdiest of the seedlings are transplanted on a warm day into the fields. The soil has previously been prepared and dressed with such artificial manures as have been found most suitable for the variety of plant being grown. A plentiful supply of potash salts is essential. Tobacco-ash contains 4 per cent. of potash. In about two months, when the plants are from 2 to 7 ft. high, the flower-buds appear. These are pinched off or "topped" by experienced hands, who cultivate an especially long thumb-nail for the purpose. At the same time "priming" takes place—i.e., the lower leaves which are torn and splashed, together with the smaller upper leaves, are removed, it being the practice to "top" low and "prime" high. Only from nine to twenty leaves are allowed to come to maturity. The constant removal of axillary buds, or "suckering," as it is called, is also necessary. The plants come to maturity in about three



"SPEARING" THE LEAF ON LATHS FOR HANGING IN THE CURING-SHED.

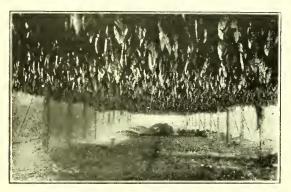
months after planting out, when the leaves commence to change colour and the tips become gummy. The stems are usually slit down to within 3 in. of the bottom, and then cut off as close to the ground as possible. A day is chosen for cutting on which the sun is not strong. The plants are then allowed to lie on the ground until evening to wilt, and afterwards straddled across laths and hung in barns. Here the important process of "colouring" takes place. By artificial heat the temperature is raised to 90° F. for thirty-six Fours; during this time the leaves become a bright yellow. The temperature is now raised to 120° F., and gradually increased to 170° F. to dry the sap completely and fix the colour. This method applies to bright

Virginia leaf. For other varieties a somewhat similar

process is employed.

Upon a mild moist day the barn-doors are opened and the tobacco allowed to become sufficiently moist to handle, when the leaves are stripped from the stems and thrown in heaps on the floor. While lying here they undergo fermentation, and in the dark varieties become of a uniform colour. During this curing and fermentation practically all the starch in the leaf is converted into sugars, etc. Leaves are now sorted for quality, about eight leaves being fastened together by a leaf at the base into a "hand." For export to this country from America the "hands" are "prized" by presses into hogsheads of thin wood, which hold about half a ton each. Turkish tobacco is usually packed in bales of two or three hundred pounds weight each; Sumatra leaf is frequently in cases.

On arrival here all the packages are weighed net by the importer or his agent in the presence of a Customs officer. The duty is either paid at once or, more commonly, the tobacco is stored in bonded warehouses for some time, during which it matures. Upon finally being removed the trader has the option of again having the package weighed for duty or paying the duty upon the original "landing" weight. Tobacco is highly hygroscopic, and so the state of the weather very largely



THE CURING-SHED,

affects the decision. Tobacco must contain 10 per cent. of moisture upon importation, and in this case, provided it is unmanufactured and unstemmed, it now pays a duty of 5s. 6d. per lb. Virginian tobacco is frequently imported either stemmed—i.e., the thick midrib largely removed—or as "strip"; this designates the halves of the lamina which have been cut away from the midrib. Stemmed leaf or strips are charged an extra halfpenny per lb., a further charge of  $7\frac{1}{2}d$ . per lb. being added in either case if the moisture is less than 10 per cent. The scales used for weighing are always of the beam pattern, and slung from the roof. It is remarkable how adept the labourers in a tobacco warehouse become at knocking the head out of a half-ton hogshead and inverting it on to the stout board, slung from the beam by ropes, which serves for the scale-pan. The weights used are in centals, not hundredweights. Alexandra Docks. Liverpool, and Victoria Dock, London, have the most extensive tobacco warehouses of any British port. At either mile after mile of hogsheads and bales may be seen. It will be recalled that a very extensive fire occurred at the former some months ago.

The manufacture of tobacco in the British Isles has become one of the most important of the minor occupations. Not only is the very great proportion of tobacco used at home prepared for consumption here, but the exportation of tobacco in the manufactured state which has been imported as leaf has become a trade of considerable dimensions. The varieties of leaf used for the various grades of tobacco will be described under the separate heads of cigars, cigarettes, etc. Although, as is well known, the finest grades of cigars are imported, cigarmaking is extensively carried on by several well-known firms. To all intents and purposes it is a protected indus-

As stated above, imported leaf pays duty at 5s. 6d. per lb., but cigars are charged 10s. 6d. per lb. The difference gives the English manufacturer a good working margin. Cigars consist of three parts—the filler, the bunch wrapper, and the wrapper leaf. The filler is the coarser tobacco forming the interior, which is held together into the desired shape by the bunch wrapper, and the whole is covered by the wrapper leaf. Inis leaf is of very fine silky texture, and is stretched on the cigar, being wound round like a puttee. Upon the quality of this leaf depends the appearance of the cigar, and as much as 25s. to 30s. per lb. is paid for fine Sumatra leaf. Havana wrapper leaf of good quality is rarely on the market, being used on the spot for cigar-making. Virginia cigarettes are made with "bright" or "semi-bright" Virginia leaf. This leaf is of the golden-yellow colour associated with cigarettes, and much larger than the Turkish leaf, also used for cigarettes. Virginia leaf may be 25 in. long and as much as 10 in. broad. Turkish "Dubec" is often not more than 3 in. in length, but much tobacco used in Turkish cigarettes is larger, and is grown in Greece, Hungary, and South Russia. Smokingmixtures are blends of light and dark Virginia, together with some Latakia, and often bulked up with China leaf. Latakia is the only case in which the whole plant is used. The plant, which is grown in the mountainous districts of North Syria, only grows to the height of about 1 ft., and is allowed to flower. Its unique flavour is due to the tarry deposit consequent upon its method of curing by exposure for six months to fires in which the Asiatic oak (Quercus Ilex) is used as fuel. China leaf is slightly smaller than Virginia, and is chiefly notable for its lack of body and flavour. It is about the thickness of tissue paper, and has been aptly described as "the leaf without soul." From the manufacturer's point of view its great virtue is that it is a good "drinker"—i.e., it readily takes up water.

In this country there is a legal limit of 32 per cent. of moisture in tobacco. Most varieties of good smokingmixtures contain 16 per cent. to 20 per cent., while Virginia cigarettes average about 16 per cent., being usually a little drier. If they are as damp as 20 per cent. the paper may be stained, and great difficulty will be experienced in smoking them. With the cheap varieties of shags and rolls it is quite another tale. Here the profit depends upon the quantity of water the manufacturer succeeds in introducing without either killing his trade or exceeding 32 per cent. The Excise officer will watch this latter possibility, and, by frequently sending up samples to the Government laboratory, check his super-activity with the watering can. For shags, Java leaf, a variety resembling a cigar-leaf, is largely used owing to its excellence as a "drinker." It will absorb half its own weight of water without looking wet. All tobaccos are moistened before being cut, the homey watering-can being the rough-and-ready method frequently employed. After cutting they are partly dried off in a steam-heated pan. It is during this process of "panning" that the aroma of the popular is the skilled out, and the man in charge of the panning is the skilled worker of the factory. He has to decide when the "nose

has developed and the moisture is correct.

Black tobaccos of the so-called "cut Cavendish" varie, ties are hot-pressed before cutting, while for "flakes the leaves are first pressed into cakes and then cut. The addition of anything as a preservative other than acetic acid is illegal. The use of acetic acid dates from the American Civil War, when stocks were difficult to keep and supply was short. The use of olive oil not exceeding 4 per cent. is permitted in the manufacture of roll. In this case the leaves are spun into a rope which is moistened with oil to prevent adjacent layers sticking when it is made up into a roll. For black roll it is hot pressed. The addition of essential oils in spirituous solution as flavouring is also permitted. True Cavendish tobacco is sweetened, and as such can only be made in a bonded factory. The sweetening agents usually employed are glucose and glycerin Such tobacco, if sold in this country, bears a special Customs stamp. Large quantities are made at the various bonded stores for use on board ship. The chewingtobaccos beloved of the sailor are all sweetened.

The nicotine-content of tobacco varies greatly. Turkish leaf contains about 1 per cent., bright Virginia such as is used for cigarettes double this quantity, while dark Kentucky or Western leaf may have as much as 5 per cent., or even more. Pure nicotine is colourless and almost without odour. It only develops that familiar smell of a dirty pipe on keeping, when it rapidly darkens in colour. It is, however, highly toxic. Blyth says that  $\frac{3}{100}$  of a grain produces headache and giddiness,  $\frac{6}{100}$ of a grain great feeling of faintness, giddiness, weakness, sickness, and purging, from which the experimenter did not recover for two days. A 10 of a grain would probably be a fatal dose. The writer has personally found even traces of pure nicotine so unpleasant as to discourage further experimenting. It has been observed that the naturally occurring lavo form is more poisonous than the dextrorotatory form of the alkaloid. The chemistry of nicotine is almost all due to Pictet and his pupils. Details outside the scope of this article will be found in the excellent monograph in Henry's "Plant Alkaloids." Tobacco-smoke consists of nicotine together with its decomposition-products pyridine and ammonia. The dis-binctive aroma of cigars is due to collidine. The sugges-tion has been made that the ill-effects of smoking are tue not to the nicotine but to the pyridine formed.

Since the growth of tobacco in the British Isles was irst permitted by the Revenue authorities in 1836 its ultivation has been carried out both in Ireland, where experiments were first made, and in England. The efforts of the planters have met with varying success, and it is only during the last decade that the quality has been such as to induce the manufacturers to consider it seriously. Ilimatic and other conditions have proved a serious andicap, and some difficulty has been experienced in uring. Latterly the cultivation has been considerably xtended in the East and South of England, and with such greater success. Although the leaf is rarely of a afficiently high quality to be used alone, much has been mployed for blending with foreign leaf. Readers of Punch" may recall the rhyme about tobacco from Hamps," which brought forth the witty reply from the lanter. The photographs illustrating this article are of bbacco under cultivation on the estate of Mr. A. J. randon, Church Brookham, Hants, and the writer is debted to Mr. Brandon for permission to use them. The hotograph which we use at the commencement of the ticle shows a field of tobacco with the plants about half-rown.



A PAPAW-TREE IN FRUIT AT PANAMA CITY.

# Building up a Proprietary.

I.-A Cough-mixture.

THE pharmacist as a rule is apt to assume that pro-prietary medicines possess no intrinsic merit, but owe their large and continuous sales simply to their extensive and forceful advertising. Some years ago this may have been true, but there is a growing disposition on the part of manufacturers to recognise the fact that a really efficacious preparation can be sold with far less advertising outlay, and will maintain its position far more readily, than one the virtues of which are all on the label and not inside the package. Of all the many remedies that the pharmacist is asked to supply in the winter season, cough-mixtures are probably the most important, and if he is to compete successfully with the largely advertised brands, some little care and forethought must be given to building up a preparation which shall be at least as efficacious and palatable as those it is proposed to supplant. The day has gone by when a small quantity hurriedly prepared and carelessly put up is of any real value: a fair quantity must be made at once, both for the sake of economy of labour and materials, and to enable a good show to be made of the finished product in the window and on the counter of the pharmacy, so as to create the impression that it is an article with a large sale.

The object of this note is to show how the pharmacist, by using his professional skill, can, with the help of his ordinary utensils and every-day drugs, turn out a coughmixture which in medicinal properties, flavour, and appearance will do him credit and give his customers satisfaction.

Suppose that we have decided to start the winter with a gross of our cough-mixture, we must first prepare some acetum scillæ; for this purpose we shall require a large, wide-mouthed bottle, and nothing will answer our purpose better than one that has contained 7 lb. of citrate of magnesia, which possesses the advantage of being easily cleaned. Into this we now put 1 lb. of finely sliced squill, 1 pint of acetic acid, and 7 pints of water, and after well shaking put the bottle in a not too cold place. If it is well shaken night and morning it will be ready in a fortnight. (It will be noticed that this acetum scillæ is not quite so strong as the B.P. directs, which is apt to give a too bitter preparation.)

We then coarsely powder in our largest mortar 8 oz. of good carbonate of ammonia, and gradually add 1½ pint (50 fluid oz.) of acetic acid (B.P.), and when the carbonate is all dissolved and the effervescence has subsided strain through cotton-wool into a bottle and mark it "Solution of acetate of ammonia."

Now we must get out our gas-stove and an evaporating-dish with a capacity of at least 2 pints. Weigh out 1 oz. of extract of white poppies and 2 oz. of powdered gum acacia; put these, with 4 oz. of water, into the evaporator, and dissolve with a gentle heat, rubbing hard with a steel spatula all the time to assist the solution. Then add 2 oz. of solution of hydrochloride of morphine (B.P.) and strain into a 40-oz. bottle. To this add 1 pint of glycerin, 2 fl. oz. of dilute hydrocyanic acid, 4 fl. oz. of chloroform, 2 fl. oz. of ether, and 1 fl. oz. of tincture of capsicum, shaking the bottle well after each addition and giving an extra long shake at the end to ensure the complete emulsification of the chloroform. Label the bottle "Chlorodyne."

We are now getting our ingredients ready, and we need some utensil capable of being heated over a gas-stove. A large-sized preserving-pan, preferably of the enamelled variety, with a capacity of about 2 gals., answers the purpose admirably. We first strain off 5 pints of the acetum scille, and by means of a gentle heat dissolve in this 12 lb. of lump sugar; then remove the pan from the stove. Eighty grains of tartarated antimony is next dissolved in 2 oz. of hot water and added to the syrup. The solution of acetate of ammonia is now gently mixed in with a large wooden spoon, by adding a

little at a time, care being taken that the disengaged carbonic acid does not cause it to froth over.

We must now trouble the household once more and obtain their largest wide mouthed jug, in which we send out for 4 lb. of the old-fashioned black treacle—not the modern golden syrup, but the real article, which is rather difficult to obtain in large towns but is still readily procurable in smaller centres at 3d. per lb. The treacle is well stirred into the fast-cooling mixture, and when it is no hotter than the finger can bear comfortably, the chlorodyne is put in.

We have now nearly finished. Only an ounce of oil of anised, dissolved in 4 oz. of rectified spirit, remains to be added. The whole must be well mixed, and our cough-mixture is completed. The finished product should be dark brown (nearly black seen in the bulk) in colour, with a taste that is at once warming, sharp and aromatic. The richness of taste that the treacle and aniseed impart to the mixture is really surprising.

The mixture is now quite ready for bottling, and we require a gross of the 2-oz. green panelled flats that the wholesale houses supply specially for this purpose; it is an advantage to bottle the mixture while it is warm, as it then pours more readily from a small jug. If the pan has a lip all the better, as we can pour direct into the jug, but if, like the majority, it does not possess one, we must borrow a large breakfast-cup and use it as a ladle from the pan.

Use good-quality corks, soft and elastic, fairly broad, but not too long, as they should not project more than half an inch from the neck of the bottle, or they will

be too high to fit the cases nicely.

The cases or cartons are our next consideration. It will be better at the beginning to content ourselves with a gross of the plain, light-brown ones of 4-oz. size, leaving the more costly, but much more convenient, readyprinted carton until we have a steady sale for our preparation, as they cannot be economically bought in quantities of less than a thousand. The cartons should be wrapped in paper of a distinctive colour, the precise tint being largely a matter of taste, but a good deep red or warm brown looks well, does not fade readily or get dirty quickly, and makes a cheerful patch of colour in our winter window. Now comes a most important item for consideration—that of the label. We shall, of course, use the same for the outside of the carton as we put on the bottle, so that our size will be limited to that of the bottle. We must have a plain, distinct type, as large as the label will allow without overcrowding, and the directions must be quite clear and explicit.

The distinctive name adopted may be that of the pharmacist himself, or he may call it the White Cross cough-mixture, the Hospital cough-mixture, or anything else he fancies, but it should attract. The doses for the varying ages should be clearly set out, together with a warning against it being given to infants. Any outward preparation like an embrocation can be briefly mentioned, and also the fact of the mixture containing a scheduled poison must, of course, be shown. The allments it will cure should be set out confidently, but without exaggeration, and, finally, the pharmacist's name and address

complete the label.

Of course, such a label makes a medicine-stamp necessary, but as it is quite impossible to recommend and advertise boldly a cough-mixture without stamping, it is better to face the situation and obtain the additional prestige of the Government stamp, which is still con-

The finished preparation should now be prominently displayed both in the window and on the counter of the pharmacy, together with some attractive showcards drawing attention to its properties and prices. price must vary according to the locality and class of trade done in the pharmacy. From 1s. the bottle down to 9d. is the usual range, and in order not to have more than one size, at any rate for the commencement, three bottles may be quoted at prices from 2s. 6d. to 2s. The total cost of making a gross of the cough-mixture does not exceed 25s., which may be reduced to not much more than 11. if made in five-gross

lots, but this does not include the cost of stamps nor any allowance for labour. But, taking everything into consideration, the total cost is less than 4d. the bottle, and the pharmacist has a preparation that he can truthfully recommend as his own manufacture, and one that has proved to be both good and useful.

# The Pharmacist Retrenches.

When I dropped in, as usual, for a chat with my friend ---, whose shop is in the busy little town of on — last,\* we talked, of course, of war-time and its inevitable economies and makeshifts. As to business, etc., my pharmacist "could not grumble, of course, but \_\_\_\_. etc. As he spoke, I caught sight of a handsome new fourteen-foot mahogany fitting running all along one side of the neatly-kept pharmacy, and I ventured to interrupt-

"Yes, yes, of course, one has to cut expenses, and so on, but I'm glad to see you keep the shop smart somehow," and I smilingly pointed to the new fitting. I know he has a harmless foible for really good old furniture and woodwork, for he had carefully preserved such nice old "bits" when he took over and renovated the shop. And I prided myself I had "touched the

spot."

To my surprise, he smiled in his turn—a mysterious and Gioconda-like smile—and, dropping his voice, said:

"You won't give the show away?

I protested that wild horses would not drag a secret

from my breast, and he explained:

"You know the old fourposter which stood in the best bedroom when I took this place, and how I used up the posts for palm-stands?" I nodded acquiescence. "But don't you recognise the cornice of the parental and marital couch?"

"So your cornice cost you nothing. But the other

parts-they are as handsome as the cornice.

"Do you remember the old mahogany dining-table and the 'leaves' put in to lengthen it when our family was large and guests numerous? Well, the supports of the shelves—the uprights—were cut from those leaves. shelves are the old ones, too good to throw away; hence my scheming this fitment. They are fixed to the uprights by brass 'cars.' The spandrels, too, are made to match the handsome existing ones—from a heel-

ball copy. They cost me about 2s. apiece."
"And that was your entire expenditure?"
"Except the labour. It took a man three or four days to fit. You see the advantage of the fitment: it's made to suit my bottles-much better than buying bottles to fit bought shelves, isn't it? I put a beaver board to cover the wall, and did the cleaning and polishing of the woodwork myself. I reckon that fitment as it stands is fairly worth 14l., and the money I paid out of pocketit's cash, and cash only, that counts in war-time, isn't it? -didn't amount to a five-pound note.

"And you wish to keep all this a sccret from war-time brother pharmacists?" was my Parthian shot.

"No, no. It's only my name and address that I don't want blazed abroad. Censor that, and I release you from your promise."

\* No "war" paragraph is complete without a few deleted names and dates, as every patriotic reader is aware. I can only hint that the town was not a hundred miles from the Metropolitan See of England, and the date quite a recent

MALTED TREACLE.—A mixture of malt extract and treacle is suggested by one of our readers as a new nutrient for children. The idea requires working out.

AEROPLANE-VARNISH.—The preservative-varnish emp in the manufacture of aeroplanes is known as "dope. consists of cellulose acctate or celluloid dissolved in ietra chlorethane with amyl alcohol and benzene. The cases on the case of the cases of the c poisoning which are reported from time to time are due to a specific action of tetrachlorethane on the liver.

# A Russian Pharmacy Side-line:

Urinology.

THE average Russian physician is an exceedingly welleducated man, and he is especially careful in the application of his knowledge in the diagnosis of disease, for which purpose recourse is had to all available aids. The Russian pharmacist, in his own sphere, is equally well educated and skilled, and he is capable of undertaking analytical work of great delicacy. In Russia there is no such thing as a dispensing doctor or a prescribing pharmacist. The doctor invariably writes a prescription and the pharmacist dispenses it, so that each occupies a welldefined sphere and each regards the other with respect. In addition to being dispenser, the pharmacist is physiological chemist, and the consequence is that pharmacy is regarded as an important branch of medicine.

Among other work undertaken by pharmacists for medical men is the examination of urine, and in order to show exactly what this involves we append a translation of an actual analysis performed by a pharmacist on behalf of an Englishman resident in Petrograd:

### Examination of the Urine of Mr.

Analysis No. 1132)9, to be handed to Dr. N. ine.

Physical and General Chemical Properties of the Uri
Quantity of urine (offered for
examination) 660
Specific gravity at 15° C 1,016
Reaction Acid
Colour (according to Y. Fogel) 1000 Yellow
Transparency Cloudy
Influence on the plane of polarisa-
tion Not observed
Refraction and dispersion of light
Lowering of freezing point
Absolute osmotic pressure
Sodium and potassium urates Not found
Uric acid Not found
Calcium oxalate In large quantity
Magnesium ammonium phosphate,
calcium phosphate, ammonium
nrate Not found
Jueus Small quantity
encocytes Small quantity
pithelium-gravel and round Small quantity
Spithelium-unipolar and bipolar)
pithelium—gravel and round Small quantity pithelium—unipolar and bipolar fylinders—hyaloid, small-grained, and cereous
and cereous [Not jound
permatozoa
Spectro showing Enguination of Calculus Cut stands

### Spectro-chemical Examination of Colouring Substances and Chromogens of the Urine.

	robilin (uroc					Not	above	normal
	dol (indoxil)				•••	Not	above	normal
	catol (skatox					Not	above	normal
3	iliary pi	gments,	1	uroros	ein,			
1	urocritcin, mo	clanin,	hemog	globin		Not	found	

#### hysiological-chemical Declaration of the Urological Analysis. I. ENERGY OF OXIDATION AND (TISSUE) BREATHING.

9.10:10.80=84.26:100

Considerably below normal

Considerably below normal

Auto-intoxication is evident to a considerable degree

II. CHANGES OF MATTER IN THE NERVE TISSUE.

coording to Prof. Mairet and Gilles e la Tourette, the coefficient inreases considerably in sundry erebral maladies—in this instance (Relation of quantity of phoshoric acid to quantity of urea ... Aording to Prof. Gautier, A. obin, and Viellard, in this infance there is no indication of hosphate

10.80:1.46=100:13.5

There considerable retardation

Does not exceed normal 1.46:19.50=1:13.4

(c) Relation of average quantity of phosphoric acid to the quantity of the same acid in the form of phos-

o Prof. Gilles de la ecording to Tourette, this coefficient exceeds the normal in certain forms of lysteria and neurasthenia—in this instance

No indication

III. ALKALI OF THE BLOOD.

1.46: 0.92 = 100: 63.0

Norma7

IV. VITAL ENERGY. 19.50: 5.10=100: 26.2

Is considerably lowered

#### Analytic=chemical Determination.

Normal Integr	al Pai	rts	Norma Content 1000 c.	in i	In thinstand	e in	In the instance 660 c.	e in	Normal Daily Quantity in 1500 c.e.
Urea			23.30 0/	00	19.50	$0/00^{-}$	12.97 g	m.	35.00 gm.
Uric acid			0.47	11	0.66	11	0.14	11	0.70 ,,
Sodium chloride			10.00	2.5	5.1)	22	0 2 4		15.00 .,
Phosphoric acid			0.74	22	1.46	22	0.00	,,	3.50
Sulphurie acid		***	7.66	27	1.72	11	0.01		2.50
Total nitrates			11 00		.17.80	22	7 12	"	17.80 ,,
(?) Nitrogen of lev			1.02	"	1.70		7 70	"	2 5 7
Total solids		11103	46 CO	19	37.28	99	01.00	3.7	60.00
1.0041 501105	• • •	• • •	40.00	22	01,23	99	37,00	99	69.90 ,,

						. ,	
-not	Albumen			)		Ehrlieh's React	ion
Ħ	Peptone				ot found	Not found	
	Dextrose				or jounu	Not found	
\$ =	Lactose			)			
ar	Calcium ox	alate (	in qua	ntity			
Integral parts- normal.	exceeding	gnorm	al)		1.8		
E 0	Leicine and	tiresi	n				
60	Bile				Cod down 2		
J.C.	Acetone			} -	Not found		
Ä	Acetic acid			)			

V. URATE DIATHESIS. (a) Relation of average quantity of nitrates of urea to nitrate of urie acid ... (... According to Prof. Bouchard and Senator, in this instance ...

10.S0: 0.22 = 100: 2.04.

There is considerable urate diathesis

(b) Relation of quantity of uric acid to quantity of phosphoric acid in the form of phosphoric potassium nitrate According to Prof. Zerner, there is

0.66: 0.92=0.72: 1 Only a slight disposition to retain uric acid in the tissues

VI. INTESTINAL FERMENTATION. 1 42: 0.08 = 17.75: 1

#### VII. OSMOTIC PROPERTIES OF THE URINE. (These were not determined.)

To anyone acquainted with the perfunctory methods of urine-analysis in vogue, even in clinical laboratories, in this country the detailed work done in Russia will come as a revelation. It is true that a complete analysis may be had in London-what is called a "Continental analysis —but this is very rarely undertaken because seldom asked for. It will be noticed, however, that the above analysis is purely chemical and physical, no bacteriological report being submitted—this being regarded as a different branch and performed by trained bacteriologists. The fee charged was six roubles (nominally 12s. 6d.), whereas the fee in this country for a "Continental analysis" is 25s., with fees for searches for bacteria in addition. We have printed the report word for word, using italics to denote week the newspapers contained his advertisements.

### Insurance Act Mixtures.

THE London Panel and Pharmaceutical Committees cannot agree as to the keeping properties of the stock mixtures which the panel doctors want to prescribe on the reduced dispensing-fee system—reduced so far as panel chemists are concerned. The formulas of the mixtures are as follows:

I. Mist. Acida. IV. Mist. Ferri Arsenicalis. Diluted nitro-hydro-chloric acid ... ... Compound infusion of Arsenical solution ... Iron and ammonium citrate ... ... ... 3 m 10 m 2 dr. emulsion, gentian Chloroform L.I.P. ... Water to ... ... Chloroform emulsion, 5 m ½ oz. L.I.P. ... Water to ... 5 mV. Mist. Ferri et Magnesii Sulphatis. Magnesium sulphate ... Ferrous sulphate mixture, L.I.P., to 20 gr. II. Mist, Alba. Light ght magnesium carbonate ... carbonate ... 10 gr.
Magnesium sulphate ... 1 dr.
Peppermint water to \(\frac{1}{2}\) oz.  $\frac{1}{2}$  OZ. VI. Mist. Gentiana c. Rheo. 1 dr. Gentian-root in powder 5 gr. Rhubarb-root in | Downward III. Mist. Bismuthi. Sodium bicarbonate ... 10 gr. Bismuth oxycarbonato 10 gr. Water to ... ... ½ oz.

IX. Mist. Potassii Chloratis et VII. Mist. Ammonii Chloridi. Ammonium chloride ... Potassium bicarbonate Syrup of prune ... Virginian ... ... 30 ... | Compound | Compositus | Compound | Compound | Compositus | Compositu Water to VIII. Mist. Gentiance Alkalina. Sodium bicarbonate ... 15 gr. Compound infusion of ... 20 m camphor 2 dr. gentian Chloroform L.I.P. ... Water to emulsion, Oxymel of squill ... Syrup of tolu ...  $\begin{array}{ccc} 5 & \mathfrak{m} \\ \frac{1}{2} & \text{oz.} \end{array}$ 20 ... ... Dose: 1 dr.

It is the last four formulas that the disagreement is about. We reprint the formulas from the London Insurance Pharmacopeia. A year ago we began publication of a comparison of Insurance Pharmacopeia formulas for mixtures of the same name, and in the C. & D. Diary, 1916, are given similar formulas for lotions and preparations other than mixtures, these being compiled from revised editions of the Pharmacopeias. We now do the same in respect to the revised formulas for some mixtures. Each of the formulas is given in a single dose, and the quantities are in parallel columns to facilitate comparison. Each column is numbered, and the names of the areas, with alternative names for the prescriptions, are indicated by the numbers.

	Mist. Acida.											
			1	2	3	4	5	6 1	7	8	9	10
Acid. nitro-hyd. dil.			15 m.	7½ m.	10 m.	10 m.	15 m.	10 m.	10 m.	15 m.	_	$7\frac{1}{2}$ m.
Syr. aurantii					39 m.					_	- 1	
Aq. chloroform				_				2 dr.	_	_		
Inf. quassiæ			90 111.				_	1	_		90 m.	
Acid. hydrochlor. dil.						-			_	_	8 m.	_
Inf. gent. co. conc.							_	30 m.		3 dr.		
Inf. gent. co									2 dr.			_
*Emuls. chloroform.									5 m.			-
Inf. gent. co		to		1 OZ.		1 oz.	1 oz.					1 oz.
Δq		to	½ OZ.		1 OZ.		_	½ OZ.	$\frac{1}{2}$ oz.	$\frac{1}{2}$ OZ.	½ oz.	_

1, Birmingham (mist. acid. nitro-hydrochlor.); 2, Bournemouth; 3, Cardiff; 4, Essex (Mist. gent. acid.); 5, Gosport (Mist. acid. et gent); 6, Hull (Mist. acid. gent.); 7, London; 8, Sheffield (Mist. gentianæ acid.); 9, Portsmouth (Mist. acida amara); 10, Gateshead (Mist. gent. acid.) \* Cal proform. 1 oz., br. quillake 3 dr., aq. to 20 oz.

					Mist. Acetomorphine.							
	3.5 *						1	2				
	IVI 1:	st. Ammo	onii Picratis.		Acetomorph, hydrochler,		± gr.	1 gr.				
			1	2	Terpin. hydrat		100	2 gr.				
Ammonii picrat.			3 gr.	½ gr.	Syr. tolutan		20 m.	-				
Aq. chleroform.			-	2 dr.	Glycerin			20 m.				
Ag		to	\$ oz.	1 OZ	Aq. chloroform	t	1 OZ.	-				
1	Birmin	gham and	Gateshead; 2, H	full -	Aq	t		1/3 0%.				
_	,		concentration, and		1, Bradford;	2, Hull (?	dist. acetomorphinæ	et terpini).				

Mist. Gentianæ Alkalina.																
		. 1	2	3	4	5	6	7	8	9	10	11	12	13	. 14	15
Pot. bicarb		15 gr.			W- 1879	-					_	_				
Sodii bicarb		-	15 gr.	15 gr.	10 gr.	25 gr.	. 15 gr.	15 gr.	15 gr.	10 gr.	15 gr.	15 gr.	15 gr.	10 gr.	15 gr.	71 gr.
Ammon, carb.			; 3 gr.		_	_		_	2 gr.	5 gr.	_	_	-	2 gr.	-	2½ gr.
Tr. capsici				1 m.	# man - 1	-		-	_	_	-	_	-	_		
Inf. gent. co. conc.			-	30 m.	_	_	_				_		_			
Magnes, carb, pond,			-	_		25 gr.		_	-	-		-		-		_
Acid. carbol. liq.			-			2 m.	_	-		_		-	_		_	
Chloroform			-		-	1 m.	_	-	-					-		-
Spt. ammon, arom.			. —			_	₹0 m.	_	_	_		$11\frac{1}{4}$ m.		n. m		_
Inf. gent. co		_	-	. —			-		_	_	2 dr.	3 dr.	3 dr.	3 dr.	2 dr.	-
Emuls. chlorofo	rm.,															
L.I.P				-	-	-	_	_	-		5 m.			_	-	-
*Mist. menth, pip.	ŧο	2 OZ.	:		-	_	-	_	-						_	-
Inf. quas-iæ	to			-	_				1 OZ.			-		_		-
Aq. menth. pip.	to				_	1 oz.		_			-		. —	-	_	_
Aq. chloroform.	to		-	_	—	· —		-	_			4 dr.	_	/	-	_
Inf. gent. co	to		2 07.	_	2 07.		÷ 0Z.	1 oz.	_	½ OZ.		-	_	-	_	½ OZ.
Aq	t-o			1 oz.		-				-	1 oz.		½ oz.	1 oz.	½ oz.	

1, Birmingham (Vist. alkalina); 2, Bournemouth; 3, Bradford; 4, Cardiff (Mist. gentianæ c. soá.), Essex, Leeds, and Gateshead; 5, Doncaster (Mist. alkalina); 6, Dorset (Mist. gentian. c. sodá); 7, Gosport (Mist. soda et gent.); 8, Hull (Mist. alkalina); 9, Liverpool (Mist. alkalina amara); 10, London; 11, Middlesex (Mist. gent.); 12, Shelfield; 13, Portsmouth (Mist. alkalina amara); 14, West Riding (Mist. alkalina); 15, West Hartlepool.

\* Saturated solution of ol. menth. pip. in water.

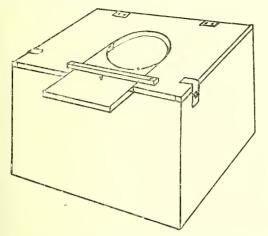
Mist. Strychninæ Acid. vel Mist. Nucis Vom. Acid.																
		1	2	. 3	4	5	. 6	7	8	9	. 10	11	12	13	14	15
Acid, hydrochlor, dil.		10 m.		_				10 m.	_				10 m.			-
Acid. nit. hyd. dil.		_	$7\frac{1}{2}$ m.	10 m.	10 fm.	10 m.	15 m.		10 m.	10 m.		10 m.		7½ m.	10 m.	15 m.
Liq. strych. hydroch.		2½ m.	$1\frac{1}{2}$ m.	-			3 m.	3 m.	-	3 m.	5 m.	$2\frac{1}{2}$ m.	_	4 m.	_	
Tr. nucis voni			_	5 m.	5 m.				5 m.						10 m.	5½ m.
Glycerin		-	15 m.	_	-	30 m.	-	_	_			30 m.	_	-	-	
Chloroform		-			$\frac{1}{2}$ m.	_		-	_					_	-	-
Ext. nucis vom. liq.		-		_	-	1 m.	_	_		-	_		1 m.	-	-	_
Inf.gent.co.conc.		_	_	30 m.	-		-	-		Ann A						
Tr.gent.co		_				30 m.		_				_			-	
*Mist. chloroform.	to	1 OZ.		- 0	_		- 1	_	-	_		-		-		
Mist. acida L.I.P.	to	_				_	_	-	_	No. of Co.	½ OZ.	10000	-		_	
Inf. calumb	ŧο		-		½ OZ.		_		-		- 1		****	_	-	1 0%
Inf. gent. co	LO.	_	1 OZ.			_	_	-		½ OZ.		½ OZ.	_			2 (12
Aq. chloroform.	to			$\frac{1}{2}$ OZ.	_	_				_	-				1	
Aq	to		_			2 02.	5 OZ.	₫ oz.	½ OZ.			*******	2 OZ.	1 OZ.	1/2 OZ.	

1, Birmingham (Mist. acida e. strychnin.); 2, Bournemouth; 3, Bradford; 4, Doncaster (Mist. acid. tonica); 5, Dorset (Mist. acidi co.); 6, Gateshead; 7, Hull (Mist. acid. tonic.); 8, Hull (Mist. nucis vom. acid.); 9, Hull (Mist. strych. acid.); 10, London (Mist. acida strychning); 12, Sheffield; 13, Sheffield (Mist. strychnina); 14, West Riding (Mist. nucis vom.); 15, West Hartlepool (Mist. gent. acid.). \*Chloron. 1 dr., aq. to 50 oz.

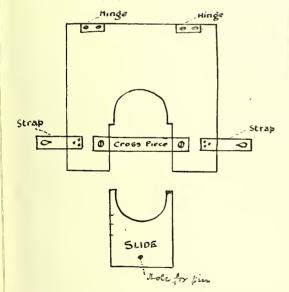
# Killing Cats.

#### A Useful Appliance.

MR. G. E. Marfitt (Leicester) writes: "Dogs are moderately easy to destroy, but cats are somewhat more difficult. Chloroform, to my mind, is not particularly humane. Prussic acid (Scheele's) freshly made is the best by a long way. It is quicker and, if properly given, absolutely sure I have destroyed hundreds of cats with it. The one great difficulty with cats is to avoid their sharp claws. Some advise using a sack or a hamper. Hampers



are useful to get pussy's head out, but one has to be very quick to get the head back into the hamper after puss has had the last drink, otherwise the rest of the cat will come out after the head instead of the head going after the tail into the hamper again, and then there is a hurried flight of the cat on to the neighbour's tiles and the dickens of a job to get her down again until she rolls down. Another objection to the hamper is that on holding the lid down it is apt to constrict the cat's throat and the poison does not get properly swallowed. Sacks are worse.



It is extremely difficult to hold a cat's head out of the neck of the sack; moreover, pussy's claws easily penetrate the sack and the holder's hands and arms, resulting often in nasty scratches. One of my old assistants invented a bat-box some years ago and made one, sketches of which are annexed.

Here is how it is made. A good strong box is obtained and the lid is put on with hinges. The box should be large snough to hold a good-sized cat easily. The lid should have a hole cut out of the front with a circular shape at the centre of the lid. Across this hole is serewed a cross-

piece of wood, as shown in sketch. Cut a piece of wood the same thickness as the lid and the same width as the hole in lid. This slide should be cut with a circular hole at one end as shown. When the lid of the box is closed this piece slides in the hole in the lid under the crosspice and forms a circular hole in the lid. This hole should be made large enough for cat's neck to be comfortable in, but not large enough for the head to come through. Straps should be fastened on either side of the lid, allowing the lid to be fastened down by means of buttons on the sides of the box.

the 1nd to be fastened down by means of buttons on the sides of the box.

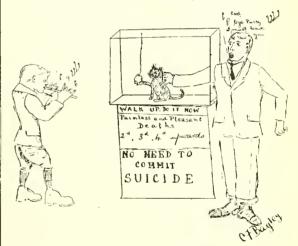
Now to use the affair. Put puss in the box, close lid, puss puts her head up immediately through the hole in the lid. Now put the slide in under the cross-piece and pin it with a movable nail or pin, running through a small hole in the slide, into the front of the box. Pussy's head is now through the circular hole in the lid and cannot be drawn into the box. All that remains is to administer the poison without any danger of being scratched, or even having to hold the cat at all. Quickly withdraw partially the slide. Pussy's head goes down because the rest cannot come out. Replace the slide, and the trick is finished as soon as puss breathes her last."

These observations may be regarded as a supplement to the practical instructions by Mr. C. Bayley, Uppingham, published in the C. & D., January 8, p. 44. Correspondents in the succeeding issues criticised Mr. Bayley's methods, and in reply thereto we received the following from Mr. Bayley too late for publication last week:

"It is a short step from the sublime to the ridiculous."

Bayley too late for publication last week:

"It is a short step from the sublime to the ridiculous, and your correspondents Messrs. Rowland and Carroll hit the latter to a T. The CO<sub>2</sub> and sparklet-bulb suggestion is immense, but carbon monoxide would be more effective if it was compressed in bulbular form, and the suggestion might be passed on to Aërators, Ltd. In order to extend Mr. Carroll's humanitarian principles might I



suggest that the bottle-washer, if musical, should spare a few moments to help the poisoner by singing a cat Car(r)ol(l), such as 'Good-bye, pussy, I must leave you,' or some other soothing melody as pussy breathes her last? If the chloroformed lint was suspended by a string pussy might even play with it. As regards a lethal chamber, thus is obviously a good idea if a suitable vapour is chosen, and for this purpose hydrocyanic acid is, I maintain, the speediest and most humane. If the sides of the chamber were carefully lined with cotton-wool and suitable wreaths were at hand it would form a happy climax to a rapid transition to that haven of rest where all good pussies go."

FOR THE LONG NIGHTS a most entertaining and readable book is Wootton's "Chronicles of Pharmacy." The two volumes, published at a guinea, are sent post free by the C. & D. for Ts. 6d.

"CHEMISTS' WINDOWS."—An illustrated treatise on the art of displaying pharmaceutical and allied goods in chemists' shop-windows, with chapters on ticket-writing, the mechanics of moving devices, and business-promoting accessories. Contains 216 pages and 200 illustrations. Price 3s. 6d., by post 3s. 9d., from the C. & D. Book Department, 42 Cannon Street, London, E.C., or leading wholesale

# Sunny Spain.

An Easter visit to Spain is described in this article by an English writer, who devotes himself chiefly to the present position of pharmacy in the Peninsula.

LEFT the French frontier on the morning of Maundy Thursday, and arrived at Valladolid the same evening to find all the shops shut—even the pharmacies. The incident was impressed on my mind by the fact that I had no soap, my cake having been left behind at the French hotel where I had been staying. each closed pharmacy there was a printed notice giving the addresses of the four pharmacies which remained open "every Sunday," but I was never lucky enough to run across one of the pharmacists who were "keeping open shop," so I gave it up and waited till the Friday, when, curiously enough, all the pharmacies were open all day long, although all other shops were closed. Frenchmen who complain about the "English Sunday" should be sent to Spain to spend Maundy Thursday and Good Friday. No wheeled traffic is allowed in the streets on either day (the hotel 'buses were the only exception), although the religious street processions do not begin till 6 P.M. on Friday. Valladolid was the capital of Spain in Tudor days, and boasts the finest "pasos" in the Peninsula. I left before the hour when these coloured wooden images are carried through the streets, but saw some marvellous specimens in the Museum, as lifelike as anatomical models and as artistic as the most captious critic would desire—painful, in fact, in their realism. Some were more primitive and naïveamong others a relief, representing St. Cosme and St. Damian, the patron saints of the healing art. Advanced surgery boasts a good deal nowadays of "grafting" skin and organs from the living animal on the human patient, but this panel represented a still more remarkable case. A negro, with his leg cut off, lay on the floor, and on the bed was a white patient on whom the two worthy brothers in question had "grafted" the missing leg. "Note," said my guide, "that the miracle is the more remarkable bearing in mind that in the fiftcenth century the negro was considered to be a mere animal."

### THE NIGHT-BELL.

On the closed shutters of one pharmacy I noticed the inscription "Llamam al Sereno" (call the watchman), and inquired its meaning. It appears that here, as at Madrid, runaway rings at the pharmacist's night-bell and other stupid tricks of street-boys or drunkards are frequent enough to become a nuisance. So it is arranged that the patient or doctor requiring the pharmacist's services after closing-hours should address himself to the watchman. Your Spanish watchman is a plain-clothed, corduroy-clad individual not to be confounded with the modern uniformed and armed policeman. His badge of office is a stout staff with an oil lantern attached, and one sees him trying doors and examining keyholes in City-policeman style. But what distinguishes him alike from the London bobby and the Spanish policeman is that he carries the keys of all the houses in the particular manzana or "block" of houses which he supervises. There is no ringing for the concierge as at Paris, no latchkey as in London: the sereno is there to open (and close) the door all night long. If you require the pharmacist, he opens the pharmacy door and rings a bell inside, and the proprietor or assistant on duty answers this night-bell in the usual way. The sereno possibly owes his name to the fact that in days gone by he used, like our old London Charlies, to call the hour and the weather. "Ave Maria purissima. Ten o'clock, and a fine (sereno) weather."

To return to the soap question. It is a curious fact that fancy soap (savonnettes) is a popular "side-line" with Madrid stationers. The connection between paper and soap is not obvious to an Englishman, but is doubtless as natural to a Spaniard as that between bread and eggs, which also seem to go together in Madrilene retail business. The question of who should sell fancy soap

is evidently a delicate one. In England it is the chemist; In France, I should say, the herbalist or perfumer. Every country has its usages, and in each case it is a matter of pure convention.

#### KEEPING OPEN SHOP.

The Spanish "contribucion" is something like the French "patente"—a tax levied on tradesmen "keeping open shop"—but the special feature of the Spanish system is that the proportionate sum to be paid by each individual is fixed by the body corporate. The Treasury, for instance, informs the "Gremio," or guild of Madrid pharmacists, that the amount their corporation is expected to raise this year is 60,000 pesetas. If this sum were equally divided among the 150 Madrilene pharmacists they would have about 400 pesetas (say, 16l.) apiece to pay; but it would be manifestly unjust to tax the little man in the back street of a working-class quarter at the same rate as the practitioner with a big frontage on a fashionable thoroughfare and an old and well established clientèle. The Treasury, therefore, takes as a base the "share" of 400 pesetas (16l.) and simply stipulates than no one shall pay less than a quarter share or more than four shares, and leaves the Pharmacists' Committee to apportion the burden. Each pharmacist has the right to attend and vote at the committee election (held in September or October as a rule). Once the committee is elected, the delicate task is taken in hand, usually working out somewhat as follows:

				]	Pesetas		
14 " First cates	gory"	pharmaeists,	each	pay	1,600		22,400
8 "Second ca	tegory	,")) ••	11	,,	1,000		8,000
18 "Third	11	**	**	**	500		9.000
28 "Fourth	,,	**	,,,	1.1	400		11.200
9 "Fifth	* *	**	**	**	250	***	2.250
36 "Sixth 37 "Seventh	11	**	* *	11	150 100	***	5,400 3,700
or seventin	7.2	**	**	* *	100	• • •	0,100
							01.050

The use of "round" figures will explain the overplus of 1,950 pesetas

Any pharmacist who considers his assessment unduly high can complain to the committee, and if the committee refuses his request he has the right of appeal to the Minister of Finances. But he is required to produce positive evidence of the injustice done him, and the process is a long and troublesome one.

This curious method of taxation has some good points, especially from a corporate as opposed to the individual point of view. For instance, an open or notorious "cutter," a pharmacist who is known to have lent a foreigner the privileges afforded by his diploma to enable him to introduce "patents" more readily into Spain, or any other generally unpopular individual, may be named by the committee for higher scales of taxation. The system also helps to keep down the number of pharmacies, as a beginner is apt to be charged the maximum rates during the first few years he is in business. Injustice to the individual for the corporate good seems the idea. It opposes all innovation. The older pharmacists "vote solid" against the newcomer, and fair treatment is long and hard to obtain. But, like many other institutions, when actually put upon trial the "gremio" system is worth just what the men who compose it are worth, and reflects their virtues and vices, their selfishness or disinterestedness as a whole.

#### MODERN MADRID.

My Spanish tour included a visit to the capital, and a guide took me round. As I went I kept my eyes oper for pharmacies. Among those I saw was the "Quee Mother's Pharmacy" (Farmacia Reina Madre), one of the oldest in Madrid, it having been founded in 1578. The building of which it forms the ground floor is marked by a memorial tablet to the most popular of the older and died. It stands in the Calle Mayor or old Highester of Madrid, not far from where a monument (it scribed with the names of the victims) marks the site of the bomb outrage on the King's wedding-day, May 3 1906. "Madrid has not yet found its Baron Haussmann (as a Barillina guide sarcastically remarked), and the Calle Mayor quarter has so little altered that the 1656 m

would suffice to guide the present-day tourist round this part of the Spanish capital.

ADVERTISING IN SPAIN.

The trolley trams of Madrid are now commencing to display "knifeboard" advertising matter. The advertisers are not yet very numerous, but include Bishop's Citrate of Magnesia (a well-known preparation here); the Petroleo Gal, "Verdol," and, of course Scott's Emulsion—that man with the cod is to me as suggestive of Spain as a mantilla or a torero. Gal's perfumeria is a very smart place, now in the Carrera San Jeronimo (the Rue de la Paix or Bond Street of Madrid), just opposite the Perfumeria Inglesa, another first-class place, where the stock is largely French and English. Windowshow is not a characteristic of Spanish pharmacies, even in Madrid. The British pharmacist's endeavour is to get as much glass and as little wood framing as possible into the street front, but here it seems the other way about. The fact is, in this sunny land it is necessary when the noonday sun strikes the shop frontage, to close these great shutter-doors for coolness sake. A "window-display" is such a rare sight that I noted the few I came across in Madrid. In the Calle Barquillo, one pharmacist devotes a whole window to 1-lb. and 2-lb. packages of boracic acid, and the other to boxes of cough-lozenges; in the newer streets-the Calle Sorrano, for example-a few pharmacists make a window-show of their own specialities -chest or stomach remedies; and in the Plaza de Santo Domingo there was a whole window-show of insect-powder (Leyer, Londres-Paris). One rather effective street advertisement I saw in Madrid was a camel with a saddlecloth advertising a French boot-polish (Ecla). The patient quadruped is led through the best-class shopping streets every fine day; and it only seems to rain here once a fortnight, so the "Ship of the Desert" is usually under way.

### Chemists' Windows.

Photographs of windows sent to the Editor for reproduction should be accompanied by notes on how the displays were arranged.



#### A Malt-and-Oil Window.

HE top codfish was coloured. It was made of paper at out and stuck on cardboard. Fastened on the back of his was some preserved barley, both of them being sus-

pended from the top of the window. As the fish was huge it added considerably to the attraction. The strips at the top of the window were lettered in black and white, and were attached to the glass. The showcard at the bottom



is reproduced here on a large scale. It also was just sufficiently out of the ordinary to attract. The empty cartons at the back and sides were suitably arranged. They were in green, with white and black lettering. At the topof the window, and just seen in the photograph, were two inverted pyramids of empty cartons, which were fastened to the top of the window. To finish off neatly curtains were placed at the back of all.—H. A. Martin, Leicester.



#### A Speciality Show.

The paper strip "Nervous breakdown tablets" was pasted on the window outside. Immediately beneath this, and stuck on the window, were cut-out letters in white paper, "The best remedy." On the six discs of white paper with black border were the words, "For nerve pains," "For brain fag." "For that tired feeling," "For insomnia," "For mental exhaustion," and "For palpitation." These were joined together by painted strips of paper 2 in. wide in black and white and arranged in the manner shown. The centre showcard was supplied by the makers of the speciality, as also were the two cards at the bottom on either side. The centre pyramid was an old case covered with white paper, and the lettering was printed in black. On the shelves above were outers with bottles of tablets, while two black-and-white showcards with the words "Weak nerves made strong" and "Creates appetite and increases vigour" filled up the empty spaces. Other showcards were placed on the top shelf.—H. A. Martin, Leicester.

# English Cod-liver Oil Industry.

By Frank Jagger, Ph.C., F.C.S.

A S we are now on the eve of the new Norwegian fishing off the Lofoten Islands, it is of interest at the present time to explain briefly the principal methods by which the oil is extracted from the fresh liver of the cod. That known as the "steam process," introduced about fifty years ago, still holds the field. The livers are placed in large jacketed steam-pans and subjected to heat not exceeding 82° C. The oil is then drawn off and cooled to a temperature of  $-5^{\circ}$  C., when a considerable quantity of "fish stearine" which is used for soapmaking, is deposited; this is removed by filtration, and the oil is then ready for medicinal use. The oil is only partially extracted by this process, as the livers retain a certain amount; they are then subjected to a greater heat and the oil separated. Finally, the livers are pressed, and a third yield of oil obtained, which is known com-mercially as "brown" or cattle oil. Before the days of steam-refined oil, and when livers

were fewer than they are now, they were placed in barrels and allowed to putrefy. By the end of the season they were in a varying degree of putrefaction, according to the time and temperature. A certain amount of oil is set free by the bursting of the hepatic cells of the livers; this is skimmed off and set aside as "raw medicinal oil," which is of a pale-yellow colour. The con-



CODFISH ON THE TRAWLER'S DECK.

tents of the barrel are stirred and left for a few weeks, and the surface oil is again skimmed off, the product being known as "palc oil." A repetition of the stirring and further exposure to warmer weather results in the production of a further quantity of oil, known as "pale-brown oil." The three yields of oil thus obtained are col-lectively known as "natural oil," and owe their differences in properties and colour to the varying proportions of putrefactive products present. The livers are subsequently placed in suitable vessels and subjected to a greater heat, when a fourth yield of oil is obtained, known as "brown oil." The oil obtained by this method is always contaminated with decomposed products of the liver, and therefore possesses a rank odour and nauseous

Some three years ago it was my privilege to spend a holiday on a fishing trawler in the North Sea, and during that time I became acquainted with the methods adopted by the fishermen. It is almost unnecessary to say that there is a great variety of fish in the net when hauled. I remember watching the fishermen "gutting" the fish. and I was rather surprised to see haddocks' livers, lings' livers, etc., being thrown occasionally with those of the cod into the casks. I might say that about 75 per cent. by weight consisted of cod livers. On inquiry I found that the money obtained for the livers was divided between the men, and this explains why other fish livers were mixed with these of the cod-

It may be asked if the fisherman is able to decide as

to whether a codfish is in an unhealthy condition. I have never heard of any livers being rejected on that score, and my opinion is that many diseased livers are mixed with the healthy ones. The livers are at least ten days old when received by the cod-liver oil extractors. [This does not apply to Norwegian medicinal oil, as a large proportion of the livers are dealt with immediately they are caught .- ED.]

During the half-year ended June 30, 1914, no less than 2,223,199 cwt. of codfish was landed in Great Britain, figures which are probably not surpassed by any other country. It follows therefore that a fair quantity of oil must be produced in England, and this

is done chiefly at Grimsby.

The introduction of strictly chemical data into the requirements of the B.P. 1914 is a step in the right direction. But the limits in the case of the saponification-value, iodine-value, and specific gravity are far too great to be of absolute importance in deciding whether

an oil is adulterated or not.

From a comparison of the chemical and physical data of the oil from livers of the Gadida (cod family) it is obvious that the detection of liver oils that have been fraudulently admixed in smaller or larger quantities with genuine cod-liver oil is in the present state of our chemical knowledge an unsolved, problem. Formerly analysts considered that other liver oils could be detected in cod-liver oil by taste. Thus the ordinary pollock or coalfish (Gadus merlangus) liver oil has so unpleasant a taste that it cannot be admixed with cod-liver oil without injuriously affecting the taste. This is a well-known fact, and for that reason the fisherman has ceased his former practice of mixing this objectionable liver with the cod livers. The liver oils of the haddock, ling, and whiting are so very similar to cod-liver oil in taste that their detection is almost impossible to the expert.

Some time ago Professor Crossley, F.R.S., in a lecture before the Pharmaceutical Society, described the general method employed for the conversion of liquid oils into solid fats by "hydrogenation," whereby their commercial value is greatly increased. In Newfoundland the quantity of cod-liver oil now being converted into much more valuable solid fats by this method is already extremely large. In the near future we may look forward their commercial value of the solid fats by the method is already extremely large. In the near future we may look for the solid fats of the s ward to this comparatively new industry being fostered in England, and proving a valuable source of glycerin

and soap manufacture.

# The Finnish Pharmacopæia.

THE essential oils dealt with in the latest (fifth) edition of the Finnish Pharmacopæia are few in number, and the tests given are not very exhaustive. The alcohols used for solubility purposes are strong alcohol of 90 to 91 per cent. by volume and weak alcohol of 69.8 to 70.6 per cent. strength. The articles treated are as follows:

Anisced Oil.—Specific gravity at 20°, 0.980 to 0.990; congealing-point, 17°; soluble in three volumes of strong

alcohol. Camphor.-Melting-point 175°-178°

Lemon Oil.—Specific gravity at 15°, 0.855 to 0.861; soluble twelve volumes of strong alcohol.

in twelve volumes of strong alcohol.

Fennel Oil.—Specific gravity at 15°, 0.965 to 0.975; soluble in one volume of strong alcohol; solidifies below 0°.

Menthol.—Melting-point 43°-44°.

Clove Oil.—Specific gravity at 15°, 1.044 to 1.070; soluble in two volumes of weak alcohol.

Peppermint Oil.—Specific gravity at 15°, 0.900 to 0.910.

Rose Oil.—Specific gravity at 30°, 0.850 to 0.863; solidifies at 18°.

at 18°. Sandalwood Oil.—Specific gravity at 15°, 0.973 to 0.985;

Soluble in six volumes of weak alcohol.

Mustard Oil.—Specific gravity at 15°, 1.022 to 1.025.

Turpentine Oil.—Specific gravity at 15°, 0.860 to 0.870; boils at 155°-162°; soluble in eight volumes of strong alcohol.

Thymol.—Melts at 50°152°.

Cingraps Oil.—Specific gravity at 15°, 1.023 to 1.040;

Cinnamon Oil.—Specific gravity at 15°, 1.023 to 1.040; soluble in three volumes of weak alcohol.

# Marriages.

Authenticated notices are inserted without charge.

Brelsford—Betts.—At St. Peter's, Leicester, on January 18, Staff-Sergeant Frank Brelsford, R.A.M.C., to Miss Ida Doris Betts. The Sergeant was formerly with J. Young & Sons, chemists, Leicester, and has for nearly a year been in charge of the dispensing department of the 5th Northern General Hospital, Leicester.

DAVIES—DE MARTINI.—By licence, on January 24, at St. Joseph's R.C. Church, Penarth, Reginald Davies, pharmacist, Penarth, third son of the late John Davies, schoolmaster, Penarth, to Carol, the third daughter of Mr. B.

De Martini, Penarth.

### Deaths.

Authenticated notices are inserted without charge,

FEE.—At Ballybay last week, Mr. Arthur Fee, chemist and druggist, The Medical Hall, Ballybay. He was well known in the commercial and public life of county Monaghan, and carried on business with his brother as Fee Bros.

LAPHAM.—On January 18, at Crewe Road, Sandbach, Cheshire, Mr. Harry Latham, aged sixty. Deceased was dispenser to his father until the latter's death, then acted in a similar capacity to Dr. Riddett.

Lewis.—On January 17, after a brief illness, Montague Richard Warren, third son of Mr. R. G. Lewis, chemist and druggist, 5 Southbury Road, Enfield Town, N., aged

PLEASANCE.—At Melbourne, Vic., on November 18, Mr. Charles Pleasance, pharmaceutical chemist, aged sixty-five. Mr. Pleasance was born at Beccles, England, and, emigrating to Australia, was apprenticed in 1868 to Gould & Martin, Collins Street, Melbourne, a business which he subsequently acquired and which is now carried on by his son, Mr. F. Norman Pleasance. Deceased took a great interest in municipal work, and in 1899 was elected to the Melbourne City Council, and became Lord Mayor of Mel-Melbourne City Council, and became Lord Mayor of Melbourne in 1904. Ho resigned from the City Council in 1907, and since then had been almost continuously in bad health. Mr. Pleasance was President of the Pharmacy Board from 1905 to 1907.

STOTHARD.—At 1 St. Cuthbert's Terrace, North Shields, on January 15, Mr. Thomas Stothard, chemist and druggist, aged seventy-one. Mr. Stothard passed the Modified examination in 1871. He was formerly an assistant to Mr. John Bailey, Tynemouth, then started in business on his own account; but ill-health caused his retirement twenty-

ive years ago.

Wain.—At Red Lion Square, Newcastle-under-Lyme, on January 21, the wife of Alderman C. J. Wain, Ph.C., from pneumonia after a comparatively short illness. Mrs. Wain as left four young children. She was a daughter of the ato William Massey, ironmonger, High Street, Newcastle-under Lymp under-Lyme.



MR. G. WEDDELL.

WEDDELL.—At Seaton Carew, West Hartlepool, on January 20, Mr. George Weddell, chemist and druggist, managing director of Cerebos, Ltd., aged sixty. Mr. Weddell was born at Kelso, and served his apprenticeship in that town. He then went as assistant to Mawson & Swan's business at Newcastle - upon - Tyne, after which he went to Paris and Mentone, and also had excellent business experience as a traveller on the Continent for Burgoyne, Burbidges & Co. He passed the Minor in 1876. In 1881 the late Sir Joseph Swan brought Mr. Weddell back to Newcastle-upon-Tyne, and placed him as a partner, in charge of the pharmacy business; in pow reprises

MR. G. WEDDELL.

a partner, in charge of the pharmacy business in new premises in Grainger Street West, the model became proprietor in 1901. In the santime, in accordance with the traditions of the Newstle business, Mr. Weddell turned his attention to a wider here of interest. He developed Cerebos salt, an improved ble-salt with exceptional physical characteristics and etetic advantages. This speciality became a great

success, and in 1894 was floated as a limited company with a capital of 50,000\(lambda\). A subsequent reconstruction increasing the capital to 250,000\(lambda\). The Mawson filter was another special production of Mr. Weddell's, and he had a large interest in a silver-mine in Nevada, to which he made periodic visits. The business of Mawson, Swan & Weddell was in 1912 amalgamated with the pharmacy of Proctor. Son & Clague (established 1678), the combined businesses being now carried on under the name of Mawson & Proctor, Ltd., with Mr. T. Maltby Clague as the managing director. Those who visited the British Pharmaceutical Conference in 1909 at Newcastle-upon-Tyne will have a pleasant recolin 1909 at Newcastle-upon-Tyne will have a pleasant recollection of Mr. Weddell. At that time he lived at a beautiful house near the famous Jesmond Dene, where he entertained the members of Conference at a garden-party in circumstances which have left a permanent impression on in circumstances which have left a permanent impression on all who were fortunate enough to have been included in the party. Mr. Weddell had considerable literary tastes, which are best shown in "Arcana Fairfaxiana." a faesimile of a manuscript volume of apothecaries' lore and housewifery connected with the Fairfax family, which he published in 1890. The sympathetic treatment which this interesting volume received from the author is rendered especially valuable by the historical notes which Mr. Weddell contributed, and also by a study of handwritings of the seventeenth and eighteenth centuries, which the author undertook with a view to settling some moot points of the seventeenth and eighteenth centuries, which the author undertcok with a view to settling some moot points as to the authenticity of the volume. The original volume was discovered in a lumber-room of the old premises of Gilpin & Co. at 135 Pilgrim Street, Newcastle. About the same time Mr. Weddell published "How Do I Stand?" a capital little work on bookkeeping for chemists, which he freely distributed to brother chemists. A book for recording family events, entitled "Family Records," was another of his productions, which included a method of apportioning family expenditure. He was also a musician and poet, a choral march of his entitled "Honour to the Mighty" having a considerable vogue some years ago. The verses he composed regarding German atrocities, some of which were reproduced in The Chemist and Druggist a year ago, well express the contempt with which Englishmen regard were reproduced in The Chemist and Druggist a year ago, well express the contempt with which Englishmen regard a nation which so far disregards the unwritten laws of civilisation as to massacre defenceless citizens on laud and sea. The verses have been recited at recruiting-meetings with great success. His favourite study was sociology, upon which subject he contributed papers to the British Association and other learned Societies. Although Mr. Wedlell technologies are recruited as a succession of the succession of the British association and other learned Societies. Association and other learned Societies. Although Mr. Weddell took no prominent part in municipal politics, he supported whole-heartedly the Newcastle Guild of Help and was a member of the Newcastle Economic Society. Mr. Weddell leaves a widow and three daughters. He was buried on January 22 at Greatham, one of the prettiest of old-world villages in the North Country. On the side of the village which merges on the marsh-land, and thence to the sea, are the salt-mines and works of Cerebos, Ltd. About 400 employés at the works, besides many prominent business men from Newcastle (forty miles away), attended to show their sorrow at the passing away of such a genuine business men from Newcastle (forty miles away), attended to show their sorrow at the passing away of such a genuine friend. Messrs. T. Maltby Clague and J. R. Stewart represented the directors of Cerebos, Ltd., Mr. H. W. Noble represented the Newcastle Pharmacists' Association, and Messrs S. Oliver, H. B. Watkins, W. R. Gray, D. J. Weddell, and C. E. Clague (Sergeant, R.A.M.C.) represented Mawson & Proctor, Ltd.

Young.—On January 21, Mr. John Young, pharmaceutical chemist, Elgin, aged eighty-four. He was a native of Rafford and served his apprenticeship with the late D.

tical chemist, Elgin, aged eighty-four. He was a native of Rafford, and served his apprenticeship with the late D. McBean, chemist, Elgin. After spending some time in London and Glasgow, he passed the Major examination in October 1868, and finally acquired Mr. McBean's business at 116 High Street, Elgin. He ultimately took into partnership Mr. John Innes, chemist and druggist, who acquired the business on Mr. Young's retirement about eleven years ago. Mr. Young took an active part in the public affairs of the town. For twenty years he served as acquired the business on Mr. Young's retirement about eleven years ago. Mr. Young took an active part in the public affairs of the town. For twenty years he served as a member of the Town Couneil, and for part of that period was a magistrate, holding the office of Lord Provost for two terms (six years). He was all along a keen supporter of the Volunteer movement, and during the South African War entertained at his own expense detachments of Volunteers on several occasions. On his retirement from the Town Council he was entertained to a complimentary dinner as a mark of appreciation for his services. He also took an active part in Church affairs. Mr. Young is survived by a grown-up family of three sons and two daughters.

#### Killed in Action.

Casswell.—In France, on January 14, Major Charles William Casswell, aged twenty-nine, only son of Mr. Thomas Casswell, 71 Windsor Road, Southport, representative of Johnson & Sons, Manufacturing Chemists, Ltd., Finsbury, E.C.

DAVIDGE.—At No. 1 War Hospital, Reading, on January 20, from gunshot-wound received in Gallipoli, Corporal Henry Edward John (Jack) Davidge, 13th Divisional Signal Company, R.E., only son of Mr. Henry N. Davidge, Ph.C., 23 Rydal Road, Streatham, aged twenty.

HORNE. Private J. L. Horne, of the Manchester Territorials, and son of Mr. John Kay Horne, chemist and druggist. Tarleton, formerly of Accrington, has been killed

### Personalities.

Authenticated notes are inserted without charge if not in the nature of advertisement, and subject to Editorial approval.

Mr. DAVID DAVIES, chemist and druggist, Porth. Rhondda Valley, has been elected Treasurer of the local Chamber of Trade.

DAVIS, chemist and druggist, of Grays (Essex). has been elected a member of the Committee of the local Association.

Mr. James Mackenzie, of the Singapore Dispensary, has completed his holiday in this country, and sailed for eompleted -Singapore last week.

Mr. Victor J. Woolls, chemist and druggist, Cecil Square, Margate, has been appointed Organist of the Union Lodge of Freemasons.

Mr. R. G. LAYBOURN, chemist and druggist, High Street, Margate, hus been elected a member of the Committee of the Margate Working Men's Club, of which he is the retiring President.

Mr. R. L. Brown, who has obtained the A.I.C. certificate from the Institute of Chemistry, is employed in the laboratories of W. Martindale, 10 New Cavendish Street, London, W.C., as an experimental chemist.

Mr. A. H. Jones (Ayrton, Saunders & Co., Ltd.) has been elected to represent Leeds on behalf of the United Kingdom Commercial Travellers' Benefit Society at their annual grand meeting, which is being held this year at Bristol.

Mr. William Forrest Livesey, Ph.C., who has been acting as chief checker for the Laneashire Insurance Committee since 1913, has been appointed chief of the pricing department of the same Committee, to which reference is made elsewhere in this issue.

THE LATE JOSEPH JARVIS BLAYNEY, chemist and druggist,

The late Joseph Jarvis Blayney, chemist and druggist, 10 Alexandra Terrace, Haslingden, Lancs, formerly of 55 Deardengate, Haslingden, who died on December 11 last, aged eighty-four, left estate valued at 4,9551, 16s. 4d. gross, with net personalty 4,9211, 7s. 1d.

Mr. E. Haworth Eure, Ph.C. Hull, has a wide reputation outside pharmaceutical circles as a dramatist, and his fame in this direction will be augmented by his latest production, "Griselda." a poetic drama. When it was produced last week before the Park Street Church Literary and Social Union, Mr. Earle appeared in the part of the Bishop of Saluce, Mrs. Earle as Griselda, and the daughter Sinnetta was represented by Miss Phyllis II. Earle. Sinnetta was represented by Miss Phyllis II. Earle.

Some Time Ago we received from Griffiths & Prentice, British chemists, Valparaiso, an excellent photograph of



SENOR P. PREECE.

Precee, or Senor Perey Precee, of that firm, which is here reproduced. The photograph sent to us shows Mr. graph sent to us shows Mr. Precee in full figure as he came off the shooting-range, as captain of the British Rifle Club, Valparaiso, winners of the Gold Trophy, Santiago, April 1915. That is all we are told about him, but we need scarcely say that at need scarcely say that at the present time every man who can use a gun with such excellent results as Mr. Prece has shown s wanted in the British Armv.

Palmer, Peggy fifteen, yourgest daughter of Mr. J. Spencer Palmer, pharmacist and dental surgeon, Thornbury, Glos..

has passed the examination for an associate of the Trinity College of Music, London.

Bro. Fred Luxton (James Townsend & Sons, Exeter and London) has been elected for the tenth year Preceptor of the Exeter Lodge of Instruction. Bro. Luxton is also P.P.G. Deacon (Craft), P.P.G. Treasurer (Mark), and P.P.G. Treasurer (H.R. Arch), all of the Province of Bro. Luxton is also Devon.

Mr. Herbert William Colley, chemist and druggist, Grimsby, who has been appointed President of the Proprietary Articles Trade

Association in succession to Mr. William Edwards, London, was born at Bridlington Quay, Yorkshire, in 1870, and after his preliminary education was apprenticed to Mr. H. J. Jackson, Ph.C., Bridlington Quay. Thereafter he studied at the Westminster College of Westminster College Chemistry and I of Phar-Chemistry macy, winning the medal for botany, and eer-tificates of honour in chemistry, pharmacy, and materia medica. He passed the Minor examination in July 1892, and was afterwards an astistant for some years in Sir Riehard Robinson's late pharmacy, Malant Company Malant Malan



MR. H. W. COLLEY.

son's late pharmaey, Malden & Co., Brompton Road, London, S.W. He left this on purchasing the business of the late Mr. Mason, chemist and optician, Grimsby. From that time Mr. Colley has taken an active part in public work, first as a member of the Grimsby Board of Guardians, and he has been for many years a member of the Grimsby Pharmaeists' Association, of which he long acted as Secretary, and is now Vice-President. He is also Vice-President of the Grimsby Chamber of Trade and was its Chairman in 1914. Since the National Health Insurance Act came into force Mr. Colley has been a member of the Grimsby Insurance Committee, as well as of the local Pharmaceutical Committee. mittee, as well as of the local Pharmaceutical Committee, the has long been a member of the Council of the Society of Chemist-opticians, and for fourteen years has served the Proprietary Articles Trade Association as a member of the Council Council.

Mr. RICHARD WELFORD, chemist and druggist, the newly elected Chairman of the Public Pharmacists, and Dispensers' Association, is well

creeted Chairman of the Pupulsers' Association, is well known to many C. & D. readers, having spent nearly the whole of his life in institutional work, and from time to time published some very useful notes exocially notes. useful notes specially pertaining to hospital dispensing. A native of Buckinghamshire, Mr. Welford migrated early in life to the North of England, and, after a six years' apprenticeship to a chemist in a manufacturing town, passed the Qualifying examination in October 1879. After several periods as assistant, he joined the staff at the Lancaster County Asylum, remaining four years. Later he was at the Brighton and Hove Dispensary, from which place he obtained his present post as personal that the Asylum, which institution was taken over by the service of the se the Qualifying examination in



pensary, from which place he obtained his present post as Colney Hatch Asylum, which institution was taken over by the I.C.C. in 1889. Since Mr. Welford entered the serwell ord entered the service the changes have been many. A photographic department was installed, and was voted a great success; this assumed great proportions, of which some 100,000 negatives in the store-room are silent witnesses. Here, it may be noted, Mr. Welford's inventive faculty has resulted in an arrangement by which resides a resulted in an arrangement by which, using an ordinary camera and slide, two photographs (a profile and full-face) may be taken on one plate. An interesting collection of weir photographs, showing obscure disease, abnormal conditions, etc., have been gathered together, and of these many have been used to illustrate medical and surgical treatises on mental diseases. With the increasing growth of the institution (the number of immates being 3,000), sethe dispensing-work has developed. Mr. Welford is supervising the institution of the mental diseases. vising the installation of manufacturing-plant for the pre paration of galenicals, and when this is completed to dispensary will compare favourably with modern Londo hospitals. In addition to the busy day's duties, Mr. We ford has given up much time to Association matters, is

macy and a native of Hanover. Our photograph was taken by Mr. William Mair, F.C.S., on the occasion of a visit to Profes-sor Tschirch at

Berne, Switzer-land, who appears on the

pers has all the

presence and personality of the senator.

and past master of the cere-monies. He has

done much good

work in the Scientific and Ethical Sections, and has

Chairman of the Historical

is an exceptionally gifted speaker.

been

pears on right. Dr.

Past-President of the Public Pharmacists' and Dispensers' Association, and has been the prime mover in obtaining many valuable reforms. The coming year will need a strong and capable leader to deal with several matters of concern to public pharmacists, and members are par-ticularly gratified that Mr. Welford has agreed to accept office.

At the annual meeting of Blackburn Liberal Association last week Mr. W. Woolley, J.P., manufacturing chemist, was elected a Vice-President and one of the Hon. Treasurers, and Mr. R. Lord Gifford, J.P., was elected to serve on the Executive Committee for another year. Mrs. was chosen as a representative on the Committee of the Women's Liberal Association.

PROFESSOR SIR JOSEPH JOHN THOMSON, O.M., D.Sc., LL.D., F.R.S., was on January 25 presented with the Albert medal of the Royal Society of Arts "for his researches in chemistry and physics, and their application to the advancement of arts, manufactures, and commerce." The Albert medal was founded in 1863 as a memorial of the Prince Consort, and is awarded annually "for distinguished merit in promoting arts, manufactures, and commerce."

MR. WILLIAM C. ALPERS, D.Sc., the new President of the American Pharmaceutical Association, is Dean of the Cleveland (Ohio) College of Phar-



tion. Originally on Merck's New Vork profes-DRS. ALPERS AND TSCHIRCH. sional staff, he established pharmacy of his own in 1900 in New York, and this and pharmacy of his own in 1900 in New York, and this and others succeeding it have always been the embodiment of his idea of what an ethical pharmacy should be. The Alpers' pharmacy is now conducted by his son at City Island, N.Y., a fine new residential quarter. Always a teacher, Dr. Alpers, during all his business career, associated himself closely with educational matters, first as a member of the New Jersey Board of Pharmacy and later as a trustee of the New York College of Pharmacy (now nits eighty-eighth year), culminating in his having much o do with the assumption of the latter as a Department of o do with the assumption of the latter as a Department of Columbia University, New York. Dr. Alpers was appointed Professor of Pharmacy and Dean of Cleveland College of Pharmacy, Western Reserve University, in 1914.

ienna pharmacists has sent a memorandum to the Ministers f Commerce and of the Home Department asking that a egular supply of glass medicine-bottles be ensured. In age the scarcity of glass is not soon overcome it will be upossible to dispense medicines in the usual manner. TURPENTINE DISTILLATION in Poland is oeing carried on by TUPPENTINE DISTILLATION in Poland is being carried on a large German invaders. The "Pharmazeutische Zeitung," anuary 15, contains a photograph of German soldiers on be Eastern theatre of war occupied in distilling turpentine il in a very primitive apparatus. The wood is heated in retort built up of stones, the vapours are led into a boling-vat, and the turpentine oil flows through open ooden tubes into the vessel in which it is collected.

SCARCITY OF GLASS.—The "Hauptgremium" of

## Associations' Winter Session.

Other meetings are reported under Insurance Dispensing Reports.

Chemical Society.—A meeting was held at Burlington House, London, W., on Thursday, January 28, at 8 P.M., Dr. Alexander Scott, F.R.S. (President), in the chair. The Chairman spoke feelingly of the loss the Society had sustained by the death of Sir H. E. Roseoe, one of the oldest Fellows. he having joined the Society in 1855. The first paper was by Messrs. J. C. Philip and A. Bramley on the Action of Water on Cupric Thiocyanate. The authors said that it had long been known that by the prolonged action of water cupric thiocyanate was completely reduced to the that it had long been known that by the prolonged action of water cupric thiocyanate was completely reduced to the cuprous salt. Also it has been shown that thiocyanic, hydrocyanic, and sulphuric acids are formed. This does not represent the whole change, for they have found that carbon dioxide is also produced, also animonia. When, however, all these bodies are estimated there is a deficiency in nitrogen in the total. The slowness with which the ammonia is liberated on heating the solution in the reaction that with soda suggrested that there might be some urea flask with soda suggested that there might be some urea. formed. This was found to be so. A number of experiments were carried out in which the reaction between water ments were carried out in which the reaction between water and cupric thiocyanate was allowed to proceed to the end. This takes from ten to twenty days. The following compounds were estimated: Carbon dioxide, ammonia sulphuric acid, thiocyanic acid, urea, hydrocyanic acid, and the amount of copper deposited was weighed. The amounts of carbon, nitrogen, and sulphur were calculated into atomic ratios, and as these were found to be nearly 1:1:1, it was concluded that these were all the bodies produced by the reaction. When the thiocyanate was precipitated from a solution of copper acetate a quantity of cipitated from a solution of copper acetate a quantity of cyanogen was detected and estimate 1. It was found to be impossible to represent the change by one simple equation, but the following three reactions were found to give, by calculation, results for the total acidity produced very closely approximating to those found by experiment:

A second paper was read by Dr. F. L. Pyman on a new synthesis of Histidine, in which a short history of the work on histidine was given and a valuable new method was introduced. In this Dr. Pyman stated that on a previous occasion the author had synthesised this important aminointroduced. In this Dr. Fyman stated that on a previous occasion the author had synthesised this important amino-acid by converting hydroxymethylglyoxaline into chloromethylglyoxaline, condensing the latter with the sodium-derivative of ethyl chloromalonate, hydrolysing the resulting ester, and treating the α-chloro-β-glyoxaline propionic acid thus formed with ammonia. The racemic form of histidino obtained in this way was resolved by means of the acid tartrate. In the new synthesis hydroxymethylglyoxaline is oxidised to glyoxalineformaldehyde, which behaves in many respects similarly to benzaldehyde. Glyoxalineformaldehyde (i) condenses with hippuric acid in the presence of sodium acetate and acetic anhydride to give 2-phenyl-4-(1-acetylglyoxaline-4 (or 5)-methylidene)-oxazolone (ii), which yields α-benzoylamino-β-glyoxaline-4 (or 5)-acrylic acid (iii) on hydrolysis. The latter is readily reduced to benzoyl-r-histidine (iv), from which r-histidine (v) is obtained by the action of boiling hydrochloric acid, the method of synthesis being similar to Erlenmeyer's method of synthesis obtained on reduction. The latter is of interest, since it contains an ethanolamine grouping similar to that in adrenine. In physiological properties, however, it is less active than aminoethyletyoxaline (inina polyhethylanine). to that in adrenine, In physiological properties, however, it is less active than aminoethylglyoxaline (iminazolylethyl-

Chemists' Assistants' Association.-The Council has decided not to hold any more meetings of members while the war lasts, owing to the absence of so many members on military duties. The session, commenced in October 1915, is to be considered as suspended—not closed—and it is intended to resume it within six months after the declaration of peace. Communications addressed to headquarters will receive attention.

Glasgow.-A meeting of the Glasgow and West of Scotland Chemists' Association was held at 165 Hill Street, Glasgow, on January 20, Mr. McMillan (President) in the chair. Mr. J. Miller Spiers gave a lecture on Digestion and the Alimentary Canal. On the motion of Mr. J. P. Gilmour, a vote of thanks was awarded to Mr. Spiers

Hampshire—The President and Vice-Presidents of the Hampshire County Pharmaeists' Association have issued a circular regarding improvements in the organisation. The districts comprised within the Association are to be divided into sections, and these again are to be sub-divided, so that the pharmacist in charge of a section can, after having eanvassed the chemists within his district, report to the Council of the Association, and thus reflect the true state of trade coinion.

Lancashire (M.E.:.-The annual meeting of members the North-East Lancashire Chemists' Association was held on January 20 under the presidency of Mr. C. A. Critchley.



Mr. R. Lord Gifford, J.P.,

The Secretary (Mr. Fred Law) read correspondence with the Clerk of the Insurance Committee relating to the procedure to be adopted in accounts in the rendering future, and also concerning "Rep. mist." On the latter On the latter question assurance was given that the subject is about thoroughly discussed. Mr. Law added that arrangements are being made for a visit from a representative of the Proposition of the Propositio Proprietary Articles Trade Association to this district. The Chairman said regarding Rep. mist." he hoped that the practice of writing repeat prescriptions would be abolished entire'y. Medical men have taken up the matter Medical of over-prescribing with satisfactory results. Mr. Law Mr. R. Lord G'fford, J.P., Ph.C., passed the Major in 1878, and took over the business of the late Mr. Pickup, counts, which were approved. Blackburn. He was elected to the Council of the Phermaceutical Society in 1901, and takes great interest in political matters.

Mr. Critchley then gave a review of the year's work. This included a reference to Lord Derby's recruiting scheme, and a letter was read from the Blackburn Tewn

Clerk as to the steps to be taken by those, such as chemists, whose occupations are included in List D. The officers for the ensuing year were then elected as follows: President, Mr. R. Lord Gifford, J.P.; Vice-President, Mr. C. A. Critchley: Treasurer, Mr. J. W. W. Openshaw; Auditor, Mr. Parkinson; Secretary, Mr. Fred Law. It was agreed to continue affiliation with the Blackburn Chamber of Tanda with Meetrs Parkinson; A. J. W. W. Openshaw; A. W. W. Op Trade, with Messrs, Parkinson and Law as delegates, Mr. R. L. Gifford, J.P., Ph.C., the new President, then gave an interesting review of pharmaceutical matters, and said while the position of pharmacy at the present time might appear 'scrious and delicate, there is a great deal of engouragement in the situation. Referring to the checking arrangements at Pleanhaux Superior States and the situation. arrangements at Bloomsbury Square, he said this would prove of material advantage to individual chemists. A subscription of one-fifth of a penny per insured person is only equivalent to a 1½-per-eent, insurance against undersharging, and there are further benefits. In regard to the proposal that the Society should take up the regulation of proposal that the Society should take up the regulation of the prices of proprietary articles, he explained the reasons why this cannot be done, and cautioned chemists to beware of cleavage in the ranks, which would be detrimental to their interests. He referred also to the ability which Mr. Woolcock has shown in his dealings with Government Departments. Replying to a question as to the status of chemists in the Army, Mr. Gifford said he had no doubt that in the course of time pharmacists would enter the Forces on the same footing as doctors do to-day—they would be given commissions, and would have the same privileges and be entrusted with special work. privileges and be entrusted with special work.

London (S.W.)—A meeting of the South-West London Pharmacists' Association was held at Stanley's Restaurant on January 18, Mr. W. II. Goy (President) in the chair. Letters were read from the Brixton Pharmacists' Associations and the Stanley Stanley Pharmacists' Associations and the Stanley Pharmacists' Association and the Pharma Letters were read from the Brixton Pharmaeists' Association, urging the South-West Association to take a more active part in the future policy of Insurance dispensing. It was resolved to place before the London Organisation Committee suggestions that if prompt payment of accounts is not made, and if there is a decrease in the profit as compared with the old Tariff of more than 15 per cent., chemists should be advised as a body to give notice at the end of June to come off the panel. Another recommendation which the meeting agreed to was that chemists and stores be urged to cease the sale of Beecham's pills loose. A resolution was also carried urging the adoption of the A resolution was also carried urging the adoption of the Liverpool price-list for London. The question was then discussed as to educating the public to buy British goods wherever pessible, and those present welcomed the sugges-

tien. Mr. C. Bruce was appointed Trade Secretary, to deal especially with matters connected with business. Mr. John Keall, who was congratulated on his election as Vice-President of the Proprietary Articles Trade Association, explained the Pharmaceutical Society's checking scheme. and the meeting agreed "to abide by whatever action the Society decides upon the matter.

Society of Chemical Industry .- A meeting of the Edinburgh and East of Scotland Section was held in the Cockburn Hotel, Edinburgh, on January 19, Mr. D. B. Dott in the chair. Mr. B. D. Porritt, B.Se. (Lond.), chief chemist to the North British Rubber Company, Edinburgh, read a paper on the Functions and Organisation of a Technical Laboratory. This was an appeal to the manufacturer who Laboratory. This was an appear to the manufacturer who surveyed his business in this way, and probably asked himself, "Do we require a chemist?" or "Are we making the best use of our laboratory?" The value of the chemist to the manufacturer is, he said, unquestionable, but it should not be emphasised to the exclusion of other factors equally essential for commercial success, and industrial shortcomings should not be attributed to neglect of research without realising that such neglect is only one manifestation of a lack of foresight, thoroughness, and organisation. While the institution of an efficient laboratory would certainly make a good business better, the chemist unaided would seldom transform a failure into a successful enterprise, since the manufacturer who has failed to appreciate the necessity for scientific assistance until his business is on the brink of disaster has generally committed many other vital errors of commercial judgment in addition to the omission of a laboratory. In the course of the discussion Mr. J. Rutherford Hill suggested that as we have organised Mr. J. Rutherford Hill suggested that as we have organised the nation to prosecute the war, we might similarly organise the nation from a commercial point of view. One had a feeling that after all the secret of Germany's success in getting a footing in all the markets of the world had been the realisation of the necessity for combining high scientific skill with commercial methods, and that was the part to which we should have to direct our attention after the war. Dr. II. E. Watts also read a paper on the Fat of Nux Vomica.

# Coming Events.

This section of the "C. & D." is reserved for advance notices of meetings or other events. These should be sent to the Editor by Wednesday of the week before the meetings, etc., occur.

Tuesday, February 1. Röntgen Society, Institution of Electrical Engineers, Victoria Embankment, London, W.C., at 8.15 p.m. Dr. Sidney Russ on "The Injurious Effects Produced by X-Rays."

Wednesday, February 2.

Pharmaceutical Society of Great Britain, 16 Bloomsbury Square,
London, W.C., at 11 a.m. Council Meeting.

Leeds Pharmacists' Association, Hotel-de-Ville, at 8 p.m. Address

Lecats Pharmacists' Association, Hôtel-de-Ville, at 8 p.m. Address by Mr. W. L. Currie, Glasgow. Birmingham Chemists' Recreation Club, Pitman Hotel, Corporation Street, at 2.30 p.m. Whist-drive and afternoon tea; proceeds to be devoted to the Wounded Soldiers' Fund. Tickets (1s. 6d. each) from Mr. B. Gretton Watson, Alecster Pharmacy, King's Heath.

Thursday, February 3.

ical Society, Burlington House, Piccadilly, London, W.

8.30 r.M. Lecture by Professor W. H. Bragg, entitled
The Recent Work on A-Rays and Crystals and its Bearing Chemical on Chemistry

North London Pharmacists' Association, St. Padarn's, Salterto Road, Seven Sisters Road, Holloway, N., at 3 P.M. Monthl meeting.

Great Yarmouth Pharmaceutical Association, 156 King Stree at 8.30 P.M. Monthly meeting.

Folday, February 4.

Royal Institution of Great Britain. Albemark Street, Picc dilly, London, W., at 5.20 p.m. Professor W. Eateson, "Fifteen Years of Mendelism."

SOYA-BEANS.-H.M Consul at Dairen reports that t SOYA-BEANS.—II.M Consul at Dairen reports that t value of soya-beans exported from Dairen during 1914 w 1,779,365/., an increase of 800,568/.; of bean-cake, 2,347,08 a decrease of 249,475/.; and of bean oil, 763,370/., an incre of 43,293/. The year's export of beans amounted to 255, tons, being 100,533 tons in excess of that for 1913. Jar was the heaviest purchaser with 139,222 tons, followed South China with 65,498 tons. Exports to Europe amoun to 25,806 tons, an increase of 23,644 tons compared with 15 In bean-cake there was a decrease of 32,605 tons compared with the previous year. with the previous year.

# Insurance Act Dispensing.

A Record of matters concerning Chemists' interests in the National Health Insurance Acts.

### Reports from Local Centres.

With special reference to the supply of medicines and appliances.

#### ENGLAND.

Cheshire.—It was reported to the Insurance Committee on January 19 that for the present quarter the chemists have been paid 3,100%, on account.

Essex.—At the meeting of the Insurance Committee on January 25, the Special Sub-Committee on Prescription-pricing reported on their negotiations with the Commissioners regarding the procedure for the ensuing year. After delegates from the Sub-Committee had discussed the working of the proposed East Anglian scheme with representatives of the other districts concerned, the matter was discussed at a conference with the Commissioners, following which the latter wrote offering to make arrangements for the pricing of prescriptions during the first quarter of 1916. The representatives of the several Insurance Committees had accepted the offer, and the Sub-Committee now recommended that the Essex Committee accept the provisional proposals of the Commissioners. With this recommendation the General Purposes Committee and the Medical Benefit Sub-Committee agreed. The Finance Sub-Committee who had considered the memorandum issued by the Insurance had considered the memorandum issued by the Insurance Commissioners relative to the administrative procedure in connection with the drug-supply arrangements for 1916 and prescription pricing, in which it is pointed out that chemists will be required to submit monthly the scripts dispensed by them, together with a statement of account, recommended that an advance payment at the rate of 6d, per script he made for the prescriptions dispensed during Laure. script be made for the prescriptions dispensed during January and received at the pricing-establishment not later than February 3; no payment, however, to be made of any amount less than 10s. The report was adopted. The Special (Pricing of Prescriptions) Sub-Committee reported Special (Prieing of Prescriptions) Sub-Committee reported that they had a further conference, when an officer of the Insurance Commission attended, and the subject was fully discussed. It was resolved to accept the provisional proposals made by the Commissioners, and to give every facility to the present staff being transferred to the new establishment. They had since been informed that the Insurance Commissioners are arranging for rooms in preestablishment. They had since been informed that the Insurance Commissioners are arranging for rooms in premises adjoining the Committee's offices. The Chairman (Mr. J. H. Burrows), in moving the adoption of the report, said that at the last meeting it was decided not to favour the proposals of the Insurance Commissioners for the pricing of prescriptions by a staff controlled by a Joint Committee composed of representatives of many Insurance Committees and they then appointed six members to place Committee composed of representatives of many insurance Committees, and they then appointed six members to place their views before the Insurance Commission. They saw Mr. Vivian at the Commission, and he might say that he did not convince him (the Chairman) that it was desirable at the present time to establish what they thought and held was another authority. Against their view, however, was the fact that practically all the other Committees had agreed to the proposal of the Commission, and they were the only authority in the great district—from the Thames to the Humber—that was standing out. It was true that heir prescriptions were more than one-third of the total, and their opinion appeared to have great weight, because of the successful manner in which the work had been arried out. The price of prescriptions had been reduced o a reasonable level, a good understanding had been ecured between the practitioner and chemist, while at the ame time, he believed, the interests of the insured person vere being protected. They were distinctly told that great ressure was being put by the Pharmaceutical Society that hemists should be paid their accounts under a new system, which did not allow of so much standing over. which did not allow of so much standing over. When they ound that all the Insurance Committees in the new area ad agreed to come within the group, except themselves nd possibly one other small Committee, it seemed to them be ungracious to stay outside. Continuing, he said that could not find any evidence that the several Insuranco ommittees welcomed the scheme, or that they agitated for Under the present circumstances they had, however, cognised the position taken up by the Insurance Commison, which they said was brought about by the action on, which they said was brought about by the acuon f the Pharmaceutical Society. He added that their Comittee gave way one by one. He was bound to say at he gave way very reluctantly, for the proposal had ot carried conviction to his mind, and their justification

for accepting it was that practically all the other lusur-ance Committees concerned had accepted the scheme, and it would look singular of them if they were to stay outside. Mr. E. N. Buxton, who seconded the adoption of the report, said that when he first met the Insurance Commissioners that when he has the the restance commissioners he was of very much the same opinion as the Chairman. The reasons given by the Commissioners, for unity of management, were very powerful from the point of view of the Commission, and probably if well managed there might be economy, but he doubted if they as a Committee would save much by it. He thought they might save something to other Committees whose managements were expensive. Mr. C. Goode said that from the way the Chairman put the case one would believe the Pharmaceutical Society was the case one would believe the Pharmaceutical Society was rather an autogratic body. (Laughter.) But he could assure them that they were nothing of the sort. Consider able pressure had been brought to bear upon them from throughout the country that the discount system, which had become intolerable, must go. The report of the Committee was unanimously adopted. Mr. W. Adams brought up the report of the General Purposes Sub-Committee, which recognized that a contribution of 580. he paid to which recommended that a contribution of 580%. be paid to the Joint Committee for the pricing of prescriptions. This was more than they had been paying for the work, but then, as had been said by Mr. Buxton, by joining in the scheme they would be helping smaller Insurance Committees. The report was adopted. The Drug (Joint) Sub-Committee reported that the Pharmaceutical Committee had intimated that they do not consider it necessary to require the Panel Committee to make an investigation under Article 40 of the Medical Benefit Regulations, 1913, with regard to prescriptions containing proprietary preparations.

Hertfordshire.—Mr. D. W. E. Barker, F.C.S., informs us that the chemists accounts amounting to 5,851*l*. 18s. 9*d*. were for 1914, not 1915 as reported last 5,851*l*. 18*s*. 9, week (p. 48).

Lancashire.—The Pharmaceutical Committee met at the County Offices, Preston, on Wednesday, January 19, when, among other business. a Sub-Committee was appointed to supervise the new prescription-pricing arrangements. The supervise the new prescription-pricing arrangements. The Association also met in the atternoon at 2.30, when an important agenda was considered by a large and representativo meeting. The pricing of scripts by the new method was described by the chief of that department, who pointed out the importance of acting on a system which should as far as possible be uniform with London methods. He reported that the staff had assembled and were undera course of training, and would be in a favourable going a course of training, and would be in a favourable position to commence the new work on the arrival of the new Tariff, which was expected daily. A number of pharmacists present, who dispense large numbers of Insurance prescriptions, offered to send in at once a supply of the current month's scripts, so that an early start could be made. These scripts and the new Tariff duly arrived at the office, and the pricing-staff at once commenced work upon them. It is expected that this early start may make it possible to work to the Commissioners' time-table.

Liverpool.-The Special Sub-Committee of the Liverpool Insurance Committee, appointed to deal with the question of prescription pricing and checking, met on January 13, and recommended that the draft agreement and scheme which were before the meeting on December 22 be approved and recommended for adoption and sealing by the Insurance Committee. The scheme involves participation in the and recommended for adoption and sealing by the Insur-ance Committee. The scheme involves participation in the Central Pricing Bureau scheme, and permits the checking to be carried out by the Pharmaceutical Society.—The Medical Benefit Sub-Committee met on January 18, when it was mentioned that three chemists had been added to the panel, against five withdrawals. The use of rubber stamps for signing prescriptions is to be discouraged. Replies from the Insurance Commissioners regarding points raised by the Pharmaceutical Committee were considered, and agreement given to the continuance of late fees and to the arrangements for the loan of appliances. The question of "Rep. mist." prescriptions is to be discussed by the Special Sub-Committee and the Panel Committee. The number of persons entitled to Medical Benefit on January 1 was stated by the administrative officer to be 280,360.

Lordon. - The Insurance Committee met on January 27. when the report of the Finance Sub-Committee showed, on when the report of the Finance Sub-Committee showed, on the Administration Fund account, an estimated excess of expenditure over income for 1915 of 3,1007. The total expenditure was 34,5781., including 2,4797, for the Drugs and Appliances Department; and the deficiency on 1915 is increased to approximately 4,0007. The Commissioners have requested the Insurance Committee to reduce the contribution from the Sanatorium Benefit Fund; but if that is done the deficiency on administration will. is done the deficiency on administration will be increased. The Committee are paying salaries to members of the staff serving with the Colours at the rate of 2,600/, per annum, which is likely to be increased by further enlistments under

the Derby scheme. In regard to the suggested employment of young girls as prescription-pricers (see below) the Subassured that the supply of trained female Committee are assured that the supply of trained female dispensers is likely, under present war conditions, to run short, and necessitate some such provision for the dilution of skilled labour. This in the course of a few months might effect a saving at the rate of 500/, per annum in the expense of the Drugs and Appliances Department. With regard to payments to chemists the Sub-Committee recommended That no further payments on account be made to persons In the no further payments on account be made to persons supplying drugs and appliances who have resigned from the London panel since April 1915." The Medical Benefit Sub-Committee recommended "That, subject to the concurrence of the Pharmaceutical Committee, payment on account, calculated at the rate of 5d. per script, be made in accordance with the Medical Benefit Regulations, 1916, to persons supplying daylor and particles. ance with the Medical Benefit Regulations, 1916, to persons supplying drugs and appliances in respect of scripts submitted by them during each month of the year 1916." The Medical Benefit Sub-Committee reported, on the question of stock mixtures (see C. & D., January 15, p. 43), that the Commissioners had rejected four of the Panel Committee's suggested formulas, and that they required that the mixtures to which the reduced dispensing-fee applies will be stocked in bulk and region to the control of the Panel Committee's suggested formulas, and that they required that will be stocked in bulk, and not in concentrated form (see p. 158). The new Tariff states in regard to stock mixtures that the fee of 2.3d. will apply only to such liquid preparations, not exceeding ten in all at any one time, as (i) have been selected by the Panel Committee from a local Formulary or Pharmacopæia and agreed to by the Pharmaceutical Committee or (in the event of disagreement) have been adjudged by the Commissioners as capable of being stocked in bulk without deterioration; or (ii) have been adopted from a list prepared by the British Medical Association and the Pharmaceutical Society (subject to similar appeal to the Commissioners) and have been notified to panel chemists by the Insurance Committee one month before coming into use. This notice, the report points out, has not been given so that the reduced dispensing-fee is not yet operative. The Panel Committee had investigated liave been adjudged by the Commissioners as capable of nas not been given, so that the reduced dispensing-ree is not yet operative. The Panel Committee had investigated a complaint of excessive prescribing, and had declared such complaint well founded: and the Sub-Committee now recommended "that the sum of 11, 10s. 4d. be deducted from the amount payable by the Committee to the practitioner concerned, that the practitioner and the Panel Committee has so informed, and that the amount so deducted titioner concerned, that the practitioner and the Panel Committee be so informed, and that the amount so deducted be paid to the credit of the Drug Fund for the medical year 1915." In regard to the pricing of non-Tariff drugs, etc., the Sub-Committee recommended in agreement with the Pharmaceutical Committee, "that for the purpose of ascertaining the cost-price of drugs and varieties of scheduled appliances not specified in the Drug Tariff, reference shall be made to the price-list of drugs, etc., issued by the wholesale house named in the letter, dated December 9, 1915, addressed to the Committee by the Pharmaceutical Committee." The Sub-Committee further reported that they had given permission to thirteen insured persons to Committee. The Sub-Committee further reported that they had given permission to thirteen insured persons to make their own arrangements for Medical Benefit. The report of the Special Sub-Committee on Prescription-pricing stated that the Insurance Commissioners were of opinion that this work could be most economically and efficiently done by the London Committee independently: efficiently done by the London Committee independently and as in view of the new grouping system, the Middlesex Committee desire to terminate their existing agreement with the London Committee for the examination of the Middlesex chemists' accounts, the Insurance Committee have now only to arrange for dealing with London prescriptions. The Sub-Committee point out that the objects of the new scheme are to carry out the obligation to pay chemists in full at the carliest possible data; to release prescriptions as scheme are to carry out the obligation to pay chemists in full at the carliest possible date: to release prescriptions as early as possible for their investigation by the Panel Committee under Article 40; and to dispose of all questions and challenges as to the accuracy of the pricing, prior to and challenges as to the accuracy of the Panel Committee's the release of the prescriptions for the Panel Committee's purposes, so that a settlement may be effected with persons supplying drugs and appliances before the prescriptions are parted with. The Sub-Committee advocate the employment of ten or twelve girls, sixteen years old, as learners, at 10s, a week, to receive a fortnight's instruction from the at 10s, a week, to receive a formivite's instruction from the technical officer, when they should be capable of pricing 200 prescriptions daily; then another group of girls could be engaged and similarly trained. At the end of three months they should be able to deal with 400 prescriptions months they should be able to deal with 400 prescriptions a day, and the wages could be increased up to 20s weekly according to proficiency. Trained dispensers should be employed to check the girls' work, the staff being constituted as follows: One technical officer (male), at 3001, per annum; one female pricer at 21. weekly, six at 35s., six at 32s. 64., and twenty-eight at 30s.; one male clerk at 1601 to 2001, per annum, one at 1301, one at 1041, and one at 35s, weekly; three female clerks at 25s, weekly, twenty-one at 20s., and seventeen at 15s.; two female typists at 30s, weekly, and seven female machine operators at 25s.—making

a total of ninety-six persons at an approximate cost of 6,687l. per annum. The Sub-Committee think it may ultimately be found possible to replace some members of the technical staff by unqualified but accurate pricers, thus reducing the expenditure. The total cost of the scheme for 1916 would be 7,737l., as compared with 5,808l. for 1915. The latter sum is contributed by the Middlesex Insurance Committee (889l.), the London Insurance Committee (2,479l.), Panel Committee (800l.), and Pharmaccutical Committee (1,640l.); but the responsibility for the whole expense for 1916 will fall on the Insurance Committee.

Nottingham.—At the meeting of the Insurance Committee on January 21, the Medical Panel Committee reported the result of a number of cases in which it was held that excessive charges were made by doctors for prescriptions. In one instance the cost of 359l. 5s. 7d. was made in respect of 1,300 patients. The prescriptions for that number, if taken on the average cost for the whole, would have cost 163l. It was recommended that the doctor be surcharged 6l. 10s. 7d. The Committee referred the whole matter back for consideration by the Medical Benefit Sub Committee.

Salford.—The Salford and Manchester Insurance Committees have appointed a joint Committee for prescription pricing for the two districts.—At the meeting of the Salford Insurance Committee on January 25, the Medical Benefit Sub-Committee's report recommended an allot ment of 43*l*. 15*s*. to the Pharmaceutical Committee for administrative expenses for 1916. It further advised that fourteen days' notice be given to panel practitioners to discontinue "Rep. mist." prescriptions, on the ground that such practice interfered with the insured person's choice of chemist; that it involved considerable loss of time in searching for the original; and that as the pharmacists had accepted the new Tariff on the understanding that they would only have to do the actual dispensing, they could not undertake the clerical work involved in writing out the prescriptions. The Sub-Committee had decided that the price-list of The British Drug Houses, Ltd., be adopted as the "net" list for non-Tariff drugs and appliances.

Sheffield.—As the settlement of accounts for Insurance dispensing is always accompanied by so much uncertainty it is unsafe to say that the chemists' accounts will be paid in full for 1915, but the available figures as published from time to time, with the exception of the December figures, which are an estimate, give a full total, with doctors' accounts of, roughly, 12,500%, for accounts, with apparent available cash to the value of 14,500%, thus leaving a margin of 2,000% for unforescen payments and paying the chemists' claims in full. We have prepared figures giving comparisons for the three years' working of the Insurance Acts:

_	Drug Accounts	Number of Scripts	Average per Script
1st quarter 2nd do. 3rd do. 4th do.	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1914 1915 148,108 150,717 137,115 115,064 120,480 104,842 104,282 108,549	1914 1915 8.25 6.04 8.07 6.8 6.15 6.75 6.53
	15,518 6 11 12,187 13 2	509,985 479,172	7.47 6.1

soke of Peterborough.—The Insurance Committee heresolved to join the East Anglian group for pricing prescriptions. Mr. C. Gibbons has resigned from the chemist panel, and Mr. Calder, of Cowgate, Peterborough, and Mr. H. C. A. Gower, of Market Deeping, have joined it.

Southport.—At a meeting of the Insurance Committed on January 25, a letter from the Southport Pharmaceutic Committee was read, applying for an allotment, und Article 33 of the Medical Benefit Regulations, of a sum 43l. 15s. for administrative expenses of the Pharmaceutic Committee for 1916, which was agreed to. The Pharmaceutical Committee also asked that the practice of writing the mist." prescription-forms should be discontinuand the Insurance Committee resolved that fourteen danotice be given to the doctors on the panel that all pscriptions must be written cut in full, and that the temperature of the British Drug Houses, Ltd., be adop as the wholesale net price-list to be used in the case drugs and varieties of scheduled appliances not specified the table of drug-prices.

Stoke-on-Trent.—A special meeting of the Insure Committee on January 18 received a report from deputation to the Insurance Commissioners in opposition

the proposed amalgamation with either the Birmingham or West Midland Bureau for prescription pricing and king. The Chairman (Alderman Brookhouse) said they checking. had failed to convince the Commissioners that the work could be done cheaper and more expeditiously by their own could be done cheaper and more expeditiously by their own checker than by the Bureau. Mr. Edmund Jones (chemist) said the Commissioners had already decided what the Committee had met to discuss. The best thing the Committee could do was to keep the checking and pricing in their own hands. The pharmacists were quite prepared to make a contribution towards the expenses, so that there would be no risk of financial loss. The new scheme would be a no risk of financial loss. The new scheme would be a long time in getting into working order, and would cause disappointment and expense to the Committee. The Stoke checker had the thing at his finger-ends, and could do the work satisfactorily and economically. Dr. A. R. Moody said the unanimity of other Committees to join the scheme came by pressure from the Commissioners. The Chairman was called at the could be supposed. was satisfied that the Committee could do the work cheaper and as efficiently as the grouped Committees. Further, the particulars required for the Panel Committee could be obtained at the same time as the pricing, and that would not be obtained if the work went to a bureau. Mr. Jones noved a resolution reaffirming the former decision of the Committee to continue to do the work. Two amendments were proposed and negatived, and the resolution was carried, the Clerk being authorised to make arrangements for dealing with the matter on the existing lines.

Surrey.—The Insurance Committee met at Caxton Hall, Westminster, S.W., on January 26, when the Medical Benefit Sub-Committee submitted a report in regard to arrangements for medical service during 1916. Twelve arrangements for medical service during 1916. Twelve chemists have tendered their resignations, including the only chemist at Knaphill, and arrangements have been made with the panel practitioners to supply practically the whole of the insured persons in that district with drugs and appliances. It was recommended that 1s. 6d. per person be paid to panel practitioners in respect to the first quarter, and 4dd, per person in addition for those to whom they would discuss processing the supplier of the process of the service of th quarter, and 4½d. per person in addition the quarter. It was they would dispense medicines during the quarter. It was agreed also to advance 80 per cent. to chemists for 1915, agreed also to advance for the period January to April, 1916. and 6d. per script for the period January to April, 1916.

It was agreed that 150t, be allowed to the Surrey Panel
Committee for 1915, this including 100t, for checking
prescriptions, and the rest printing, postages, rent of room,
and elerical assistance from January 1 to December 31, 1915. An application from the Pharmaceutical Committee for administrative expenses for 1916 amounting to 400l. was recommended. This included 160l. for clerical and secreecommended. This included 100% for clerical and secre-arial assistance, the same for checking accounts, 40% for ent and office expenses, and the same for printing, tationery, postages, etc. The Sub-Committee also reported pon the matter of irregular practices in regard to rescriptions in certain areas, and recommended: (a) That he chemist be informed that in future he must refuse to ispense any precediminary and signed by the dector, (b) that ispense any prescription not signed by the doctor; (b) that he four doctors concerned be requested to re-collect the ispense any prescription not signed by the doctor; (0) that he four doctors concerned be requested to re-collect the rescription books in the possession of the chemist, and a formed that in future all prescriptions must bear the gnature of the practitioner concerned; (c) that the Panel ommittee be informed of the facts of the case and of the chion taken by the Committee. The Sub-Committee also aported on the conference with the Pharmaceutical Committee on November 10, 1915, the questions discussed being two covered by general agreement. It was decided that he list of The British Drug Houses, Limited, should be lopted in the case of drugs and varieties of scheduled ppliances not specified in the Tariff. The report of the mance and General Purposes Sub-Committee included the rangements in regard to the Drugs and Appliances Committee authorising the engagement of girls at 15s. per sek to price prescriptions. In regard to the payments to emists, it was recommended that the Clerk be given thority to draw cheques in respect of payments to the first payments are committed authorism to the committee authorism to draw cheques in respect of payments to the list of the payments are committed by the pricing establishent, and that the cheques be signed in time for despatch the 15th day of each month. the 15th day of each month.

SCOTLAND. Aberdeen.—At the meeting of the Burgh Insurance mmittee on Wednesday, January 26, the Committee consered a case of alleged over-prescribing by a doctor on Aberdeen panel. The matter came up on a minute of Medical Benefit Sub-Committee, which stated that there Id been submitted to them an amended report by the Id been submitted to them an amended report by the nel Committee with regard to the case. It was shown. Committee stated, that for the quarter which ended Lember 31, 1914, the cost of prescriptions written by the cost in question worked out at 1s. 1½d. per insured I son, while on a proportionate estimate the amount auilable for drugs per insured person in the city did not each 5½d. for the period. It was also indicated that so Aberdeen .- At the meeting of the Burgh Insurance

far as information was available, the doctor's prescribing had been all along of an abnormally high nature. The report concluded by intimating that "the Panel Committee were of opinion there had been excessive ordering of drugs in the case above mentioned, and they now call upon the Insurance Committee to deal with the matter in terms of Sub-Section (2) of Section 40 of the Insurance Regulations." After deliberating on the report, it was moved by Mr. Bisset, and seconded by Mr. Leith, that the doctor in question be surcharged to the extent of 6l. 5s., being approximately the amount of difference between the cost of prescriptions written during the quarter ended December 31, 1914, and the amount available in the Drug Fund on the basis of a fair average as between all doctors on the panel. This was agreed to.

**Dundee.** -At a meeting of the Insurance Committee on January 19, a proposal was carried by thirteen votes to ten that doctors be asked to give one hour in the morning (9 to 10) for consultation with panel patients.

(9 to 10) for consultation with panel patients. **Edinburgh.**—The sums paid to chemists for drugs, medicines, etc., during 1915 were: For the first quarter, 2,067l. 8s. 4d., against 2,445l. 3s. in 1914; for the second quarter, 1,427l. 4s., against 1,854l. 12s. 9d.; for the third quarter, 1,164l. 2s. 2d., against 1,259l. 9s.; for the last quarter (90 per cent. of the amounts claimed), 1,164l. 19s. 7d., against 1,358l. 17s. 9d. in 1914—a total of 5,823l. 14s. 2d., against 6,898l. 2s. 6d. for the preceding year.—The revised list of panel practitioners numbers 119; that of chemists 108, with half-a-dozen dealers in appliances only.

#### WALES.

General Meeting .- A meeting of representatives of all the Insurance Committees in Wales was held in Cardiff on Friday, January 20, for the purpose of considering and deciding as to what should be done in regard to pricing prescriptions during 1916. All the Committees were not represented, but it was agreed to accept the Commissioners' proposal to have the pricing done in Cardiff for six months. proposal to have the pricing done in Cardiff for six months. At the same time they agreed to try and push forward the scheme to have a Sub-Joint Committee of representatives of Insurance Committees to take charge of the checking of prescriptions.—A meeting of the Executive of Insurance Associations was held last week, but the pricing bureau was not discussed. Another meeting is to be held on February 3, this being a conference of Associations called by Glamorgan, Merthyr, Newport, and Swansea Insurance Committees. The opinion is expressed that Cardiff will not accept the pricing for six months only and if it is will not accept the pricing for six months only, and if it with not accept the pricing for six months only, and it it is not for twelve months they will not touch it. If Cardiff would accept six months they would all come in, and during the six months would very likely make other arrangements and withdraw. This Cardiff does not agree with, as 75 per cent. of the Associations have agreed to the pricing being done in Cardiff. done in Cardiff.

Merthyr Tydvil. - At last week's meeting of the Insur-Merthyr Tydvil. At last week's meeting of the Insurance Committee the prescription-pricing question was again discussed. Mr. E. R. Williams resented the "veiled threat" of the Commissioners that if the Committee did not send the prescriptions to Cardiff it would not share in the augmented grant. Eventually the recommendation of the Pharmaceutical Committee, to do the work locally (C. & D., January 22, p. 49), was adopted.

Monmouthshire.—The Insurance Committee on January 19 discussed the question of contracting with the Cardiff

ary 19 discussed the question of contracting with the Cardiff Committee for the pricing and examination of prescriptions on the lines of the draft scheme as an expedient for one year. The Chairman of the Welsh Insurance Commis-sioners (Sir Thomas Hughes) said the Treasury had made the free sury had made it perfectly clear that they would make good any deficiency. The pricing would have to be done by the Committee, and not by the chemists. Eventually the Committee decided to enter the scheme on condition that it was under the control of the Welsh Commissioners or some other body on

which the Committee would be represented.

Newport (Mon.)—At a meeting of the Insurance Committee on January 19, the Clerk (Mr. Ivor Phillips) reported that only a few chemists had agreed to the emergency settlement for 1914, and it was decided that no advances be made in respect of the quarter ended December 31 last until all the chemists concerned had accepted the proposed terms. The Welsh Commissioners consider the the proposed terms. The Welsh Commissioners consider the fee suggested by the local checker (Mr. Padgett) for a statistical analysis of the 1915 prescriptions is excessive, and he is to be asked to revise his estimate. It was further decided that unless the Panel and Pharmaceutical Committees agree each to contribute one-third of the cost of checking and analysis the Commissioners be informed that the Committee is unable to analyse statistically the 1915 prescriptions.—At a special meeting of the Committee it was resolved that the Commissioners be allowed to arrange for the pricing and checking for the present year.



industry are supposed to be quiet on account of the war, it is apparent from the production of this number that the condition does not apply to pharmacy, for, considering that this is an annual Winter Issue of The Chemist and Druggist, it is obvious that it shows no signs of curtailment in size-in fact, there are more advertisements in this issue than there have been in any Winter Issue since the commencement of the war, and this we believe to be due to the fact that the British chemical and drug-trades have not felt the curtailment of business which has been experienced in certain departments of British enterprise.

The same remarks may be applied to those departments of this issue to which advertising houses have specially contributed by the insertion of insets. This method of advertising in The Chemist and Druggist was commenced very early in the history of the paper, and has proved to be so advantageous that some firms never allow one of the two issues, in which the specially prepared insets are received for insertion, to pass without having some representation therein. There are examples in this issue of such insets, and it will be seen that they show no falling-off from previous monographs supplied by the firms. It is well to note that insets of this nature are always profitable, because it will be seen that the most ingenious advertising ideas have an opportunity of being produced so admirably and sumptuously that they cannot fail to be attractive to the people to whom they are specially addressed. Their object is thus secured, and little need be said now by us to ensure that every user of the commodities at home and abroad shall give these insets their special attention and consideration.

It will be seen from the notes which we give in regard to each inset that every opportunity is presented to advertisers in order to produce a monograph distinctive in character, and the notes that are appended on each of the insets suffice to show the nature of the goods advertised by each firm. It should be distinctly understood that insets of this nature are only placed in two issues of The Chemist and Druggist yearly—namely, in the Winter Issue published on the last Saturday of January, and again in the Summer Issue, which will be published this year on Saturday, July 29. The insets inserted in the present number sufficiently exemplify the conditions which have to be followed by advertisers. Most of those which are inserted on the present occasion have been produced by the advertisers themselves, but occasionally the publisher of THE CHEMIST AND DRUGGIST is asked to assist advertisers in the production of an inset. This he is always pleased to do, and he can furnish any applicant with printed particulars for the guidance of printers.

The notes which are given here are the briefest possible descriptions of the insets which may be found between the pages indicated in each note, and we ask all subscribers and readers of The Chemist and Druggist to follow up these observations by careful attention to the subject of each.

Allen & Hanburys, Ltd.,

Tn a beautifully-produced olivegreen inset of eight pages this company enumerate their selected packed goods. Each page is embellished with numerous half-tone illustrations of representative items, the background being of a delicate green tint. First in importance is a full range of extract of malt and codliver oil, then follow the plain extract of malt; of these two products two dozen samples, all different in style and "get up," are shown. Another page is devoted to cod-liver oil emulsion, petroleum emulsion, and cascara cap-

N these stirring times, when various departments of sules. Various other winter remedies, such as horehound and honey, pectoral syrup, asthma cure, lung and bronchial syrup, are shown in elegant profusion as to style and labelling. Of toilet and bath preparations almost a score are illustrated, the letterpress in each instance giving the style and size of packing. It need hardly be said that all the ingredients of these preparations are guaranteed to be of the finest quality. A distinct style of label can be reserved for every pharmacist in each locality, and when orders to the value of 12s, are placed for each preparation, the chemist's own name and address is printed free of charge. (Inserted loose.)

Brunner, Mond & Co., Ltd.,

Northwich, Cheshire, again place before our readers a two-page inset demonstrating the advantages of the "Crescent" brand of sodium bicarbonate which is specially made for the production of carbonic-acid gas for aerated beverages. The company's inset is solely devoted to this product, and full instructions as to the use of bicarbonate are given on one side of the inset. Its advantages as on one side of the inset. Its advantages as a substitute for chalk, whiting, limestone, marble, etc., in the production of  $\mathrm{CO}_2$  are now so well known that their enumeration is unnecessary. Although all soda products are higher in price as a result of the war, the bicarbonate is still comparatively cheap, and a 2-cwt. bag is obtainable on receipt of a postal order for 9s. 6d. sent to Northwich. (Pp. 64-65.)

Butler & Tanner,

Selwood Works, Frome, in a two-page coloured inset, tell how German trade is to be captured. The time to do this is never better than now, and with the co-operation of sound and practical advice by a firm who have specialised in the production of catalogues, pamphlets, circulars, etc., the capture of enemy trade is rendered much easier. Emphasis is laid on the fact that literature should be printed in the language of the country to which it appeals, and also that the prices, weights, measures, etc., which are used in that country should be correctly specified. The firm can readily undertake work of this character, as they have at their disposal a large staff of experts who can accurately translate any forcign language. (Pp. 32-33.)

Clayton & Jowett, Itd,

essence distillers. Liverpool, make the Gold Seal brand soluble essence of lemon the feature of a two-page inset, the front of which bears an artistic facsimile of a bunch of lemons and flowers in natural colours with an embossed gold seal upon a band of red silk. The inset also bears the letters "M. P." or "Messina Perfected." The reverse of the inset is devoted to B. P. S. (Belfast Preservative Syrup), which is guaranteed to be a safe and reliable anti-ferment for aerated waters. B. P. S. is sold at 1s. 6d. per lb., and is used at the rate of one dram per gallon of syrup. The inset is sent solely to our Colonial and foreign readers.

Edward Cook & Co., Ltd.,

The Soapery, Bow, London, E., and soapmakers to H.M. King George V., entrust us with the distribution of a remarkable and intensely interesting 48-page booklet on "Soap: Its History and Connection with the House of Cook's, London." The bulk of this booklet, deals with the history of the bulk of the solid the cook of the solid th booklet deals with the history of soap, from about the time of Jeremiah down to the present day. It contain a unique collection of reproductions of old prints and portraits, including the Cook premises at various stages The origin of the Cook business appears to be lost in the mists of antiquity, as it is stated that "our first authenti

records date back to the close of the eighteenth century, when the businesses were in the hands of a family of the name of 'Cook,' " A full description of the Soapery as it exists to-day is given, and well-executed half-tone reproductions are included of the toilet soap and perfumery departments. The milling, stamping, wrapping, and packing departments are all dealt with in their turn. A personal note is given by the inclusion of portraits of the past and present partners and directors, while at the beginning of the booklet is a long Roll of Honour, giving the names of the directors, staff, and workmen serving with the Forces and their rank. (Pp. 32-33.)

Hillcrest Oil Co. (Bradford), Ltd.,

Clayton, Manchester. Previous to the war practically no lanoline was made in this country, British makers who had met with temporary success having been driven off the market by German makers. Once again British makers are taking up the industry in earnest, and among them is the Hillcrest Oil Co., who in a striking two-page inset of their "Silver Crest" lanoline leave no doubt in the reader's mind that it is British. (Pp. 64-65.)

#### McKesson & Robbins.

manufacturing chemists, New U.S.A., again insert a four-page price-list of "McK. & B." capsuled pills made according to formulas of the British Pharmacopæia and other standard authorities. There is little need to say anything in praise of these products, as their reputation has been established in the British Empire for many years. There are special com-binations of 3,000 or more pills, and large consumers re given special quotations. The London agents are 5. Maw, Son, & Sons, 7 to 12 Aldersgate Street, E.C. The fourth page of the inset is devoted to "Calox xygen tooth-powder, which on its merits and by extenive advertising has acquired a lasting popularity the vorld over. G. B. Kent & Sons, Ltd., 75 Farringdon load, London, E.C., hold the British agency for the ale of "Calox," which is on the P.A.T.A. list. (Pp. 138-73).

[allock-Armstrong Far Defender Co., 86 York Street, Westhinster, London, S.W. In a two-page inset the comany explain the merits of their patent ear-defender, hich is a preventive against gun-deafness and ear-shock. he "Defender" is made in accordance with acoustic rinciples, and is guaranteed to be not permeable by ud sounds such as those from gunfire or exploding ells; at the same time ordinary sounds and conversaons are heard as usual, and no temporary deafness sues. The "Defender" is of British invention and anufacture, associated with the names of Mr. A. Malck, F.R.S., and Sir W. J. Armstrong-Whitworth, Ltd. ne Admiralty have given their official sanction to its e in the Navy, and already 20,000 pairs have been ld to those on active service. The retail price is 4s. r pair in metal pocket-ease, and trade terms will be yen to chemists and druggists on application. (Pp. 32-

lkado Toilet-paper.

A sample of this old favourite and litish-made product is inserted between pp. 64 and 65. e "Mikado" has a reputation of twenty years' standi, and the reasons why it should be stocked are given the sample. It is a high-class sixpenny line, and bears a good profit; it is also claimed to be one of the softest al purest toilet-papers ever manufactured. A supply of biness-getting sample-packets may be had gratis on a dication to any of the usual wholesale houses, such as Felay & Sons, Ltd., Burgoyne, Burbidges & Co., Butler & Prispe, Geo. Curling, Wyman & Co., W. Edwards & S., Evans Sons Lescher & Webb, Ltd., R. Hovenden & S. Sis, Ltd., F. Newbery & Sons, Ltd., Maw Son & Sons, ly, Roberts & Co., Ltd., and Sangers.

### T mas Morson & Son, Itd.,

insert a very attractive production deling with their head office. 17 Elm Street, Gray's Inn R.d, London, W.C., and Summerfield Works, Ponders (Pp. 138-139.)

The inset gives a short account of the historic house of Morson, manufacturers of fine chemicals, etc., and it is extremely interesting to trace the growth of this business from its foundation by Mr. Thomas N. R. Morson in 1821 to the present day. Mr. Thomas N. R. Morson was the first to make sulphate of quinine and morphine on a commercial scale in this country, and the pictures that are shown of the Summerfield Chemical-works at Ponders End are a revelation of the growth and importance of this business in modern chemical industry. From the account and numerous illustrations that are given it is apparent that this firm are in a position at the moment, and in the future, to supply many fine chemicals that were hitherto believed to be almost exclusively the production of Germany. The inset is beautifully produced, and will be an incentive, we feel sure, to British chemical and pharmaceutical industry in the future. (Inserted loose.)

#### The Pneumosan Co.,

132 Great Portland Street, London, W., invite attention in a four-page inset to the claims of Pneumosan, which has met with great success in the treatment of tuberculosis. The first page of the inset gives details of the principal constituents of pneumosan, dosage, physiological and physical properties, indications of in what diseases it may be used, and the therapeutic changes caused by the injections. Next follow some typically illustrated cases in which pneumosan has been efficacious in the treatment of acute and advanced tuberculosis. Cases of tubercular joint and bone disease and lupus are also reported on with equal success. The drug has been subjected to very severe tests in various sanatoria in this country and abroad, as is evident from the short abstracts from clinical reports of sanitary institutions, consulting physicians, and general practitioners. Pneumosan is manufactured under the personal supervision of Mr. A. U. Newton, B.Sc.Lond., and is issued in vials containing twenty to thirty average injections, price 15s. 6d. (Pp. 32-33.)

#### Porgès,

12 Boulevard de Magenta, Paris, in a two-page inset, give a representation of their gold blond silk transparent eatheters and bougies, taken from a plate in their illustrated catalogue. This firm is facile princeps in the manufacture of high-class elastic gum and pure rubber surgical goods like catheters, bougies, vaginal, rectal, cosophageal instruments, horse catheters, and cattle probangs. The chief points about their catheters and bougies are referred to in detail in the inset, and we may note that these goods are especially adapted for the tropics, where they will keep in perfect condition for a considerable time without any special precautions. In addition, the firm guarantee that their gum elastic and rubber catheters and bougies are not affected by sterilisation at high temperatures by steam or boiling water, and are also ab's to resist the disinfectants usually employed. These goods have an international reputation, and are in use in the French and foreign armies. navies, hospitals, etc. (Pp. 138-139.)

#### Post!ip Mills

At the present time, when every effort is being made to foster British industries, the four-page inset of this firm make a particular appeal to all users of filtering papers for pharmaceutical purposes. The actual samples attached to the inset show what the company are doing to replace foreign makes which are now unobtainable. There has always been difficulty in getting adequate supplies of pure filtering papers for analytical work, but this difficulty no longer exists. To the inset is appended a copy of the report from the National Physical Laboratory, Teddington, to whom samples were submitted for examination and comparison with the best foreign papers. These reports conclusively show, on the signed testimony of Mr. R. T. Glazebrook, director, who has made exhaustive tests, that the fullest analytical requirements are met. The papers are sent out in all sized circles from 2 to 22 in., and they can also be obtained in reams and on rolls from all wholesale houses. Stevenson & Howell, Ltd.,

manufacturers of soluble essences, Standard Works, Southwark Street, London, S.E., have an effective two-page inset portraying a bunch of lemons in natural size and colours, while a typical bird's-eye view of the Sicilian maid gathering the fresh fruit is also depicted. This is to convey the idea that the company's perfect soluble essence of lemons makes perfect lemonade. The back of the inset gives some sound advice on the desirability of using the finest quality of flavouring essences in the manufacture of lemonade, and on this point the company intimate that their perfect soluble essence of lemon "is not the cheapest essence on the market, but is unquestionably the best value." They guarantee it to be free from terpeneless and sesquiterpeneless oil of lemon, oil of limes, artificial citral, or any other admixture. This firm also insert a circular, which is a fine example of colour-work, in connection with their sparkling "Orana" orange-squash, which is prepared entirely from selected oranges. The glass bowl filled with the succulent orange, and the tumbler of squash, both in their natural colours, are a delight to the eye. The back of this circular calls attention to the "Red Ball" brand essence for cloudy stone ginger, which, no matter what the temperature is, enables one to produce stone ginger-beer at a moment's notice, but emphasis is laid on the fact that it must be the "Red Ball" brand. (Pp. 64-

The next opportunity for distributing Illustrated Circulars, Price-lists, or other advertising literature as Insets will be in the Summer Number, July 29, 1916. Advertisers should, however, give this matter their attention now, and communicate with the Publisher, The Chemist and Druggist, 42 Cannon Street, London, E.C., who will be pleased to give further particulars.

# German News.

PRICES OF FATS.-The official maximum prices of mangarine and food-fats have been still further advanced.

"RUBBER" FROM YEAST.—According to the "Südd. Apoth. Blücher and Krause have succeeded in making "rubber" from the waste matter of yeast.

RÖNTGEN-RAYS DISCOVERY.—The twentieth anniversary of the discovery of x rays was celebrated at a meeting recently of the Rontgen Society in the Institute for Physics at Berlin.

THE METAL-FAMINE.-A beginning has been made with the

appropriation of copper, brass, and nickel household articles which were required to be entered with the military authorities according to a decree of July 31, 1915.

Toll of the War.—The "Pharm. Ztg." reports that since the outbreak of war twenty-one military pharmacists and 349 pharmacists and students have been killed or died from disease. 561 modical men. 76 university professors and from disease; 561 medical men, 76 university professors and assistants, and 245 technical chemists have met with a similar fate.

HAGER CENTENARY .- Tho centenary of Hermann Hager HAGER CENTENARY.—Ino centenary of the German pharmaceutical occurred on January 3, 1916. The German pharmaceutical Press pays a tribute to his memory by publishing lengthy work and attainments. The

Press pays a tribute to his memory by publishing lengthy enlogistic articles on his work and attainments. The "Pharm. Zcit." describes Hager as "one of the most brilliant stars in the pharmaceutical firmament."

The Deutsche Pharmazeutische Gesellschaft held its general meeting on December 16. The Board for 1916 is the same as last year. In the place of Dr. Wulff, who died during the year, Mr. von der Heyde was appointed Second Secretary. From the annual report it appears that the number of members has decreased by 55; it is 1,132 now.

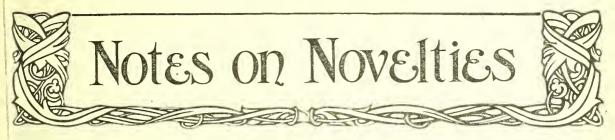
DISABLED OFFICERS.—Measures are being taken in Ger-

DISABLED OFFICERS.—Measures are being taken in Germany in order to secure for invalid officers appointments for administrative work in the service of the army, the Customs, prison, railway, and police services. The curriculum of academic study is also made easier for officers who have become disabled in the war, and employment is obtained for them in all the girl specific references. obtained for them in all the civil professions for which their education has fitted them.

FAT-SCARCITY INCREASING.—A decree regarding the use of vegetable and animal fats and oils for technical purposes was issued on January 6, according to which the use of butter, margarine, artificial food-fats, and lard for purposes other than the preparation of foodstuffs is prohibited.

Animal and vegetable fixed oils and fats may not be used for the preparation of soap or leather, nor may they be decomposed for any purpose. The Imperial Chancellor is authorised to extend these decrees to other oils and fats and for other purposes of application than have been mentioned, A further decree contains the proviso that up to January 31 palm oil, refuse of oils, and the commonest whale oils may be used for soap-manufacture. After that date the Imperial Chancellor will fix every month the quantity and the sorts of vegetable and animal oils that may be used for this purpose.

ORGANISING THE FAT-SUPPLY.—The "Scifensieder Zeitung" gives particulars regarding the organisation of the War committee for the distribution of vegetable and animal fixed oils and fats, the business of which has much increased within the last three months. This Committee is a central organisation which works in collaboration with several sub-divisions—e.g., the "Kriegsabrechnungsstellen" of the German oil-mills, of the soap and stearin manufacture of the German oil-mills of the soap and set the soap and the soap and set the soap and se tories, of the German lac-manufacturers, and of the society of German margarine and food-fat manufacturers. In addition the "Harzabrechnungsstelle" and the War Comtion the "Harzabrechnungsstelle" and the War Committees for the supply of leather and of lubricants on War Committees for the supply of leather and of lubricants on behalf of the army work in close contact with the War Committee for the supply of fats and fixed oils. The required quantities of fats and oils are obtained by purchasing the commandeered inland stocks, by making use of the inland sources of fat of all kinds (oilseeds, etc.), and by claiming all stocks of fats and oils in the occupied territorics. From the last-named source of supply 15,000,000 leagtifities of fixed oils have been imported during the left. hectolitres of fixed oils have been imported during the last three months. The War Committee has four sub-divisions in Belgium and Flanders, which also "buy" glycerin on behalf of the company for the supply of war-chemicals. On the Eastern theatre of war, in Warsaw, the Committee has got another sub-division, which not only "purchases" all available quantities of oils, glycerin, etc., but has also arranged for the manufacture of bone-fat, bone-dust, and bone-glue, and set up a tallow-manufactory in Poland. An organisation of the same kind has been made in Courland and Lithuania. The crop of oilseeds in Flanders and Poland is also used on behalf of Germany at present. The army butchers regularly send large quantities of offal fat and of bones to the War Committee, which deals with them in a large manufactory immediately behind the Front. Another sub-division of the War Committee for the supply of fats and oils is the Scientific Committee, which is seeking for new sources of supply of fats which have hitherto not been used. This Committee has, for instance, devised plant for treating the sewage and wash-waters of slaughter-houses and restaurants. Some 1,200 of these apparatus are already in constant use in Germany. In charge of the Fat Committee an organisation of bone-dealers regularly collects bones from private households. The War Committee further gives pecuniary aid to the research which is endeavouring to devise a method of obtaining fat from yeast. According to a decree of the German Dict of July 15, 1915, the War Committee is charged with the care of the entire the War Committee is charged with the care of the entire inland crop of oilseeds, which the Committee purchased on behalf of the State. The Committee has had sunflower-seeds planted all along the railroads in Prussia, Hesse, and the Rhine Province, and sunflower-seeds collected by private persons were bought by the War Committee at a rate of Pf.40 per kilo. The example of Prussia has been followed by all other Federal States in this respect, with the exception of Wurtemberg, where the sides of the railroad are used for the cultivation of cattle-food. It has also been upon the initiative of the War Committee that road are used for the cultivation of cattle-food. It has also been upon the initiative of the War Committee that beechnuts and linden-seeds are collected all over Germany. According to a decree of October 14, 1915, the War Committee only is allowed to press the oil out of the beech kernels. Extensive researches regarding the quantity and the quality of the fixed oils that can be obtained from different oilseeds have been made by the scientific subdivision of the War Committee, which have, for instance, led to the abandonment of the attempt to utilise the oil of walnuts, maize, and the kernels of different stone-fruits. The Committee further promotes as much as possible the cultivation of plants with oilseeds in Germany, Austria-Hungary, and the invaded parts of foreign countries. In order to economise as much as possible, the oils and fats that can be used for food-purposes, several measures have been taken to prevent their use for other purposes—e.g., for colour-paints, for lubricants (in which only a maximum quantity of 25 per cent. of vegetable or animal oils is admitted), for lighting-purposes, for soapmanufacture, etc. By a decree of the Home Department of October 23, 1915, the War Committee is also charged with the supply and the distribution of resin. These details suffice to show that the pressure of the Allies' sea-power is having its desired effect. also been upon the initiative of the War Committee that having its desired effect.



TROMMER MALT AND OTHER PRODUCTS.

In reply to recent inquiries, Francis Newbery & Sons, Ltd., 27 and 28 Charterhouse Square, London, E.C. (who are sole distributors of the products of the Trommer Co., Ltd.) inform us that these are, without exception, of British manufacture, and that none of the company's shares are, or have at any time, been held by alien enemies.

#### PRICE-LISTS.

The January price-list of Goodall, Backhouse & Co., Leeds, and 54 Southwark Street, London, S.E., deals with packed goods, proprietary articles, patent medicines, druggists' sundries, etc., and has been revised up to date. It should be understood, however, that, owing to the uncertainty regarding supplies, the prices are subject to alteration. A special notice is given regarding packed goods and the question of liability to stamp-duty.

#### ASPIRIN TABLETS.

ASPIRIN TABLETS.

Arthur H. Cox & Co., Ltd., Brighton, have secured a supply of aspirin of purely English manufacture at reduced rates and are, therefore, enabled to reduce their prices by 25 per cent. for bottled tablets. The present prices are as follows per dozen: 25's, 12s. 9d.; 50's, 24s. 9d.; 100's, 48s.; 1,000's, 38s. These prices, it is intended, shall remain in force so long as the stock of raw materials lasts, and will enable chemists to meet acompanyition. will enable chemists to meet competition.

#### TOMMY'S COOKER.

This aid to the comfort of our fighting men at the Front s increasing in popularity as a chemist's side-line. Chemists appreciate the handling of a genuine British article which has so many points in utility that it recommends itself. By a clerical inadvertence the page on which he announcement regarding Tommy's Cooker appeared in last week's issue was given in the "Index to Advertisements" as page 26, instead of 22. Will readers please of and correct?

#### WATER-GLASS.

Tomlinson & Hayward, Ltd., Lincoln, were pioneers in troducing silicate of soda for the purposes of egg-pre-erving, and have made a speciality of the business, a very orge proportion of chemists selling an egg-preservative ptained through them. This year, owing to continued war anditions, there should be an undoubtedly much larger onditions, there should be an undoubtedly made, see of water-glass, and chemists will do well to give their see of water-glass, and chemists will do well to give their ders now, as there are delays on the railways. Tomlinson Hayward pack water-glass of the best quality with the lemist's own name on labels and with suitable advertising-

#### Rose Simile.

Stafford Allen & Sons, Ltd., manufacturing chemists and sential oil distillers, Cowper Street, Finsbury, London, C., introduced some years ago a synthetic rose under the me of "Rose Simile." We have recently had an opporative of examining a sample of this product, and find it as me of "Rose Simile." We have recently had an opporaity of examining a sample of this product, and find it a table addition to the repertory of the perfumer. Rose falle is approximately the same strength in rose-odour otto of rose, but has the advantage that it is soluble 90-per-cent alcohol. The product has been well tested a variety of ways, and has the recommendation of perience behind it. The company will be glad to send a suple to any wholesale trader who is a buyer of perfumeces, so that comparisons can be made. cs, so that comparisons can be made.

### BRITISH-MADE HEMOGLOBIN.

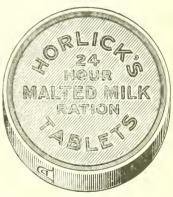
ne more fine chemical which we need never again obtain fm Germany is hæmoglobin. Duncan, Flockhart & Co., 106, 108 Holyrood Road, Edinburgh, have taken up 1, 106, 108 Holyrood Road, Edinburgh, have taken up to manufacture of hæmoglobin on a commercial scale, and he succeeded in preparing a product vastly superior to at that came to this country from Germany. The hæmoglobin prepared by Duncan, Flockhart & Co. not only has a igher iron-content figure, less ash, and a far finer colour in the Teuton product, but is entirely free from the digreeable putrefactive odour so frequently present. It

mixes readily with water. These factors form a very satisfactory start for the manufacturers, and as the makers can supply in any quantity, all demands can be satisfied without recourse to enemy makers. There are already large users of hæmoglobin, and now that a new source of supply is available we believe that the demands for medicinal purposes will increase. Duncan, Flockhart & Co., who have been for many years large makers of liquid extract of male fern, have since the war largely extended their output, with the consequence that large buyers can be met at liberal terms. This product, it should be noted, is of standard quality, and should not be confused with the crude Continental article, the use of which had tended to damage the reputation of this unique vermifuge. Wholesale buyers of liquid extract of liquorice should also note that this firm manufacture large quantities, and are in a position to sell or forested. on favourable terms.

#### HORLICK'S MALTED-MILK TABLETS.

We mentioned last week that Horlick's Malted Milk Co., Slough, Bucks, have introduced their celebrated milk tablets in a new form

for soldiers and sailors -viz., in ration-tins-which can now be supplied in limited quantities to the trade at titles to the trade at 12s. 6d. per doz. plus carriage. Each tin contains just enough to last a man for a whole day, supposing he has nothing else to fall back on, and a day's rations for eighteenpence is rations for eighteenpence is a marvel. The illustrathan the original. It will be noticed that the tin is hermetically sealed, but it is quite easily opened.



#### MIDGLEY'S MEDICATED SOAPS.

We referred recordly to changes which have taken place in the directorate of Charles Midgley, Ltd., 4 Exchange Street, Manchester, which company is known to most chemists on account of the special medicated soaps which are manufactured. Mr. Ernest G. Nichols is the new Chairman and managing director of the company, with whom are associated Mr. Francis H. Sprott, Mr. A. K. Miller, Ph.D. (Würzburg), F.I.C., F.C.S., and Mr. William Kirby. Mr. Sprott and Mr. Kirby are pharmacists. Mr. Sprott was apprenticed with Mr. J. M. Smith, Maryport, and afterwards had experience in London with Harris & Co., St. James's Street; Roberts & Co. and Savory & Moore, Ltd., New Bond Street; and Selfridge & Co., Ltd. Mr. Kirby was apprenticed with Whitfield & Sons, Scarborough. The manufacture of medicated soaps was commenced by Mr. Charles Midgley, the founder of the business, on the suggestion of Dr. Brooks, who was at the time physician to the Manchester and Salford Hospital for Skin-diseases and co-editor of the "British Journal of Dermatology." The idea taken up by Mr. Midgley has developed into an extensive business where a large number of soaps are made on a manufacturing scale. There are now about a hundred varieties of medicated soaps, and fresh ideas are always considered with a view to extending the We referred recently to changes which have taken place of soaps are made on a manufacturing scale. There are now about a hundred varieties of medicated soaps, and fresh now about a hundred varieties of medicated soaps, and fresh ideas are always considered with a view to extending the usefulness of the series. An interesting point is that the soaps are prepared with either an alkaline or superfatted base, and there is a series of soaps in powdered form. The bases, moreover, are free from excess of alkalinity and free of any filling-matter. A price-list has been produced which enumerates the medicated soaps which the company make, but recent additions are resorcin (1½ per cent.) and sulphur (5 per cent.); ichthyol (5 per cent.) and resorcin

(14 per cent.); salicylic acid (3 per cent.); borax (5 per cent.); lysol (3 per cent.); lanolin and ichthyol (5 per cent.); and ichthyol (5 per cent.) and corrosive sublimate (2 per cent.). The prices of Midgley's medicated soaps vary from 6d. to 1s. 6d., and the trade terms are fixed so as to give a uniform percentage of profit. A system of agencies is also established to facilitate the carrying of a range of the soaps; to agents a special discount is given in addition to the regular trade terms.

#### Beak Street Products.

Parke, Davis & Co., Beak Street, Regent Street, London, W., have just introduced, under the name of "Olaxine," a combination of the purest petrolatum, in the form of a jelly which in appearance and taste is exceedingly like a fruit-jelly. "Olaxine" contains 95 per cent, of the purest petroleum, and has the appearance and flavour of a jelly made from fresh fruit, such as pears. It is put up in a fruit-jelly jar, and the combination is taken in doses of one to two teaspoonfuls. "Olaxine" retails at 2s. 6d. per bottle on P.A.T.A. terms, and each jar is enclosed in an outer carton, which keeps it well until retailed. The firm are also introducing a series of sterilised solutions for hypodermic use in the form of "Glaseptic" ampoules or bulbs. Tho specimen submitted to us is the sterilised solution of emetine hydrochloride, each containing ½ gr. of the salt for the treatment of amorbic dysentery and hepatitis, Other solutions for hypodermic injection prepared in this form are adrenalin chloride (1: 1,000 and 1: 10,000), caffeine and sodium benzoate, camphor in oil, codrenine, aseptic ergot, eudrenine, compound glycerophosphate, sterilised iron arsenite; the same with strychnine, iron citrate, morphine sulphate (three strengths), morphine and atropine, nuclein, physiological salt solution, pituitrin, quinine acid hydrochloride, quinine and urea hydrochloride, sodium cacedylate (two strengths), sodium glycerophosphate, strophanthone, strychnine sulphate, thyroprotein, and veratrone, each of these being submitted in a solution required by surgeons. The firm are also making capsules and globules each representing three Blaud's pills. Twelve of these capsules are put up in a container costing 7s. 6d. per dozen boxes, a box of twenty-five costing 12s. per dozen, and 100 3s. 6d. each net, these prices being subject to the firm's discount. The capsules are well made and beautifully finished, and associated with them are globules of such articles as cascara tonic-laxative, liquor sedans, and santal oil. Both the series are fully described in a booklet for the medical profession w W., have just introduced, under the name of "Olaxine, a combination of the purest petrolatum, in the form of a which extends to twenty-four pages.

#### Memoranda.

SAMBUCI HEALING OINTMENT is made by the P. H. Milne

Co., 169 Brixton Road, London, S.W.

"Gold Cross" surgical dressings are issued by Seabury & Johnson, and obtainable from Fassett & Johnson, Ltd., 86 Clerkenwell Road, London, E.C.

TABLET-MACHINES.—Thompson & Capper, Ltd., Manesty Buildings. College Lane, Liverpool, invite applications for the price list of tablet-machines made by the F. J. Stokes

"THE LITTLE KITCHENER" POCKET-STOVE is now owned by Mr. Robert Blackie, Shen Works, Tower Bridge Road, London, S.E., and consequently is both British-made and British-owned.

"RED CLUB" ESSENCES, manufactured by Barnett & Foster, London, N., make exceedingly attractive aerated beverages, and subscribers can obtain full particulars from the manufacturers.

DRUG-MERCHANTS.—J. W. Drysdale & Sons, 16 Fish Street Hill, London, E.C., are importers and exporters of drugs and fine chemicals. The firm's special lines are mentioned in an advertisement in this issue.

CHEMISTS' RECIPES.—Mr. Tom Brooks, pharmacist, Hornsey, London, N., makes a special offer of three recipes. He supplies with the recipe instructions and a full-size sample of the finished product to show the style of get-up.

RAJAR PHOTOGRAPHIC FILMS, PLATES, AND PAPER are manufactured by Rajar, Ltd., 10 Mobberley, in Cheshire, and the company reproduce in their advertisement of this issue a picture taken on a Rajar plate and printed on Rajar paper.

"RECORD" HYPODERMIC SYRINGES are manufactured by the Pelham Surgical Instrument Co., Ltd. (late Gray & Selby), Nottingham and London, whose sole selling agents are Wilfred Turner & Co., Ltd., 30 Craven Street, Strand, London, W.C.

COMSTOCK SPECIALITIES.—The W. H. Comstock Co., Ltd., 21 Farringdon Avenue, London, E.C., call attention to their specialities—Dr. Morse's Indian-root pills, Comstock's

"Dead Shot" worm-pellets, and Comstock's nerve and hone liniment.

DAXO PASTE-POWDER is a convenient preparation for making adhesive paste. It merely requires the addition of boiling water. The packets retail at 2d. each. The sole manufacturers are Daxo Adhesive Paste Powder Co., City Mills, Durham.

VITAFER AGENCIES AND DEPÔTS in various parts of the world are a feature of the advertisement in this issue of Southall Bros. & Barclay, Ltd., Birmingham. The list, incidentally, is a tribute to the growing popularity of this valuable tonic-food.

BISHOP'S EFFERVESCENT PREPARATIONS are now all on the P.A.T.A. list, and are protected at the full face value. Chemists will get particulars in regard to them from Alfred Bishop, Ltd., manufacturing chemist, 48 Spelman Street, London, N.E.

A FINE REPRODUCTION of the new Sanaphos showcard is given in the advertisement in this issue of the British Milk Products Co., Ltd., 69 Mark Lanc, London, E.C. It is important to emphasise the fact that sanaphos is a British made and owned product.

TEMPERATURE CHARTS.—The various kinds of ruled charts for sick-room use are now made in this country by Wodder-spoon & Co., Gate Street, Kingsway, London, W.C. These charts are superior to those hitherto obtainable from abroad Chart-holders in wood and metal are also offered.

THE VARIOUS AGENCIES held by Felice Bonaventura & Co., Chesterfield House, 93 Great Tower Street, London, E.C., are enumerated in that firm's advertisement in this issue. Lanoline, hydrous and anhydrous, is also offered, the prices and samples being obtainable on application.

HENRY WHEELER & SON, import and export commission merchants, 9 Great Tower Street, London, E.C., in announcing the death of their senior, Mr. Henry Wheeler, intimate that the business will be continued by the surviving partner, Mr. Arthur T. Wheeler, son of their late senior.

ROBERTS' LABOUR-SAVING MACHINES are just the sort of thing that many ehemical and pharmaceutical manufacturers want. Two pages of this issue are devoted to them, each machine being illustrated. Particulars can be obtained from Roberts' Patent Filling Machine Co., 33 Round. eroft Street, Bolton.

PERRIER WATER.—The price of Perrier water has been increased owing to the continued advance in the cost of freight, etc. Perrier, Ltd., 45-47 Wigmore Street, London, W., advertise the present prices in this issue, but intimate that these advances represent only a very small proportion of the increase in cost of the increase in cost.

"Tubletter" Products.—The Anglo-American Pharmaceutical Co., Ltd., Galen Works, East Croydon, are the manufacturers of "Tubelettes" of menthol and Wintergreen cream. This is a favourite remedy prescribed by doctors for rheumatism, neuritis, and other affections of the nerves. It is a popular remedy.

SANITAS ANTI-VERMIN PASTE.—The Sanitas Co., Ltd., Limehouse, London, E., have prepared a simple eure and preventive of body-vermin which is particularly useful for the men in the trenches. The company offer special terms to chemists who are prepared to make window and counter displays, the particulars of which will be forwarded on application.

ARTHUR II. Cox & Co., LTD., manufacturing chemists, Brighton, advertise two new chemical products in this issue. These are chinadone (potassium oxychinoline sulphafe), an antiseptic, supplied in tablet-form; and ichthadone (ammonium sulpho-ichthyolate), used for rheumatism, skin affections, and as an internal antiseptic in constipation and dyspepsia. Ichthadone is supplied in pill-form.

WRIGHT, LAYMAN & UMNEY, LITD., Southwark, London S.E., devote two pages in the present issue to a number o showcards which advertise Wright's Coal-tar Soap and it preparations. They are a most attractive stimulus to advertising, and the originals can be obtained from the compan by retailers on application. The names of the prize-winner in the last competition are also given on another page.

"PERFUMERY AND ESSENTIAL OIL RECORD."-The Januar "Perfumery and Essential Oil Record."—The Januarissue of this publication contains a résumé of the medicin uses of essential oils compiled from Cushney's "Pharm cology and Therapeutics," an article regarding it eultivation of medicinal plants, and one dealing with the chief constituents of pure otto of rose. The editor plea for more scientific research in the region of essential oil and Mr. E. M. Holmes deals with the subject of case and cinarmon heals. and cinnamon barks.

CORVUSINE.—The season for using Corvusine seed-dressis at hand. It is made by Hawker & Botwood, Ltv 59 Mark Lane, London, E.C. It will be noted the

although most products have advanced in price of late, the price of Corvusine remains the same for the present. may be taken as a hint to anticipate requirements as much as possible. The makers supply literature regarding the uses of Corvusine and Molexo (for destroying moles) to chemists, and invite applications for agencies.

chemists, and invite applications for agencies.

SHEARS' PATENT MULSER is used by many manufacturers, with great success, for the preparation of emulsions, but some difficulty has been found in dealing with very heavy emulsions, such as those containing 50 per cent. of oil or malt extract. To deal with such emulsions, Bennett, Sons & Shears, Ltd., now fit their machines, when required, with & Shears, Ltd., now fit their machines, when required, with machine-eut back gear and larger driving-gear and striking-gear, which enables the machine to run continually at a constant speed of 500 revolutions per minute without undue friction, and doubles the output from 10 to 20 gals, per hour. Machines of the ordinary pattern can be fitted with the new gear, which is a great improvement in every case. Further particulars can be obtained from the firm at Pontifex Chambers, Shoe Lane, London, E.C.

# Veterinary Notes. By a M.R.C.V.S.

Mammitis or Garget.

INFLAMMATION of the udder is a very common complaint of milch cows. It seldom proves fatal, but in many instances it leaves an impervious gland. The causes are numerous and may be extrinsic or intrinsic. The extrinsic are cold water or air draughts, lying on wet floors, blows, injuries, and bacterial infection through cracked teats. The intrinsic is improper milking, causing decomposition of the milk left in the gland, through the entrance of bacteria into the teat, which force their way through the teat into the vessel, and there coming in contact with the nilk left behind, cause it to decompose, thus setting up the mischief. No doubt this disease is of microbial origin, either from within or without the animal economy, accompanied by the above-named causes, which lower the vitality and resisting powers, and allow microrganisms, innocuous during perfect health, to gain superirity in the attack on the highly vascular and sensitive land, the udder. The symptoms of mammitis are swelling and redness of the part, accompanied by pain on ng and redness of the part, accompanied by pain on ressure, irritability during milking, which may be ntirely suspended, and a dirty coffee-coloured or bloody-vatery discharge given instead; standing with hind legs ide apart, and straggling gait when made to walk; loss f appetite, high fever, thirst, general depression, and prmation of pus or matter, or maybe abscesses and sloughng or death of the part may occur. The effects of this isease on the milk prevents its usc, even for the lower nimals—i.e., pigs, calves, etc., as it is impregnated with ne microbes and is therefore very dangerous to health. he incroses and is therefore very dangerous to health, he treatment is: Combat the infection, reduce the flammation, see to the animal's comfort, and assist in moving the results of the malady. As in all other acterial diseases, serums are used and found beneficial, he serum recommended is equal parts of antistreptoccus and staphylococcus. Milk frequently—say, every tree house wight and day give injusting of advisors. ree hours, night and day-give injections of chinosol, in milk fever, rub with fluid extract of belladonna, d cover all with cotton-wool with a good coating of tiphlogistine. If any permanent hardness is likely exist rub daily with the following:

Hyd. iod. rub. Hyd. 10u. ... Pot. iodid. ... gr. xxx. зіss. Zij. . . . ... ... Lanolini 511.-M.

Five internally 1 lb. mag. sulph. with pot. nit. 3ss. of febrifuge medicines as required. Acetanilide is remmended. A draught often given is:

Alocs capensis, Pot. bicarb., Pulv. anisi, Sodii sulphat.

... aa. 5j. ... 5vii Aquam ad ... 5viij.—M. o be given at one dose in a quart of gruel.

very good external preparation is camphorated sp liniment, rubbed on twice daily, followed by a rubbg of pure lard as a protective.

Interdigital Eczema.

This is a form of eczema in the dog, which is getting very common and is seldom dealt with in books. It occurs principally in middle-aged and old animals, house pets, and those pampered, over-fed, and in need of exer-The animal is seen to go lame on one or more feet, and on examination there are found redness, swelling, heat, and pain of a more or less marked degree. Blisters form between the toes, and there is also a moist or clammy feel. It is very liable to recur, and gives great annoyance to all interested. Internal and external remedies are both essential. Restrict the diet and give a mild purge, followed by salines and arscniates, such as liq. arsenicalis or Donovan's solution in three to eight drop doses. Foment the feet, and, when considered ripe, lance the blisters and dress with antiseptic dressings, such as glycer. ac. carbol., ung. boracic. et cresol., etc.; and it may be necessary to cauterise with argent. nit. or liq. ferri perchlor, but these must be cautiously applied, otherwise serious results may appear by exposing the surface of the bone.

# Italian Medicinal Plants.

Professor Cortese has published the result of a study of PROFESSOR CORTESE has published the result of a study of the native medicinal plants of Italy. He divides the plants into groups: (1) Plants common to all Italy, comprising seventeen species; (2) plants peculiar to certain districts, twenty-five species. The groups referred to include the following:

tollowing:

Common to all Italy
Althwa officinalis (N.O. Malvacew).—Grows on moist and marshy
low-lying ground by the seashore, specially in the north.
Artemisia Absinthiam (N.O. Asteracew).—Found near houses and
along the low-lying seashore, also frequently cultivated.
Atropa Belludonna (N.O. Solanacew).—Grows in shady woods,
low-lying districts. It is found in various places throughout the

Peninsula.

Peninsula.

Matricavia Chamomilia (N.O. Asteracee).—Found near houses and by the wayside, the seaside, and in uplands not too high.

Colchicum autumnule (N.O. Liliaceæ).—Found from the sea to highlands; most abundant in the fields.

Solunum Dulcamara (N.O. Solanaceæ).—Indigenous to moist and marshy ground and by watercourses from the sea to the highlands.

Filix Mas (N.O. Polypodiaceæ).—Found in wild and mountainous places; rarely met with near the Mediterranean.

Fraxinus Ornus (N.O. Oleacew).—Grows in woods away from the sea and in the highlands. The tree is also cultivated in midItaly.

sea and in the highlands. The tree is also cultivated in midItaly.

\*\*Myoscyamus niger\*\* (N.O. Solanaceæ).—Found near ruins and
desolate places from the sea to the highlands.

\*\*Graminew Cynodon Dactylon and Agopyrum repens.—Both
common in fields from sea to highlands.

\*\*Malva sylvestris\*\* (N.O. Malvaceæ).—Common in all moist, herbaceous places from seashore to hilltop.

\*\*Melissa officinalis\*\* (N.O. Lamiaceæ).—Sought for in shady and
moist places from shore to hill.

\*\*Saponaria officinalis\*\* (N.O. Diantaceæ).—Found in herbaccous and
moist places, but rarely near the Mediterranean.

\*\*Dotura Stramonium\*\* (N.O. Solanaceæ).—Found in uncultivated
places from shore to hill.

\*\*Tilia platyphylla\*\* (N.O. Tiliaceæ).—Grows in wooded uplands and

Tilia platyphylla (N.O. Tiliaceæ).—Grows in wooded uplands and frequently cultivated.

Valeriana officinalis (N.O. Valerianaceæ).—Wild and wooded damp places.

damp places.

Plants Peculiar to Certain Districts of the Peninsula.

Aconitum Napellus (N.O. Ranunculaceæ).—Alpine fields and pastures; Apenines and Northern Italy.

Calamus Aconus (N.O. Araceæ).—In marshes and along the side of rivers and canals in Northern Italy and around Puglia.

Chamomilla romana and Anthemis nobilis.—Naturalised in districts from Veneto Brescia down to Naples.

Convallaria majalis (N.O. Liliaceæ).—Found in shady and stony hilly ground in the Alps, Apenines, and near Abruzzi; rarely in lowlands.

Digitalis purpurea (N.O. Scrofulariaceæ).—Grows in the moist, hilly grounds of Piedmont, in Carnian Alps, and in Tuscany.

Has been eradicated from many former habitats.

Gentiana lutea (N.O. Gentianneeæ).—Found in mountain pastures in the Alps and Apenines in the North Central districts to Calabria.

Iris Florentina (N.O. Iridacea).—Grows on old walls and rocky places in Mediterranean region, in Tuseany, and in many places

places in Mediterranean region, in Tustan, places in Mediterranean region, in Tustan, further south.

Iris pakida et germanica,—Similar habitats.

Laurus nobilis (N.O. Lauracew).—Grows on Mediterranean shore, also near Lake Garda.

Prunus Laurocerusus (N.O. Rosacew).—Cultivated for ornament, and also for its leaves, in the Mediterranean region.

Lauradulus spice (N.O. Lamiacew).—Cecurs in dry and stony places by the Mediterranean all over the Peninsula, chiefly in Ligaria. Piedmont. Glycyrrhiza glabra (N.O. Leguminosæ).—Cceurs in sandy mari-

time regions of the Mediterranean and the Adriatic. It is also cultivated in certain districts.

## South African News.

(From "C. & D." Correspondents.)

"The Chemist and Druggist" is supplied weekly to members of all the Chemists' Societies in South Africa.

#### Cape Province.

Mr. Hull, representing Parke, Davis & Co., was in Cape Town when the mail left.

Mr. H. S. Pollexfen, to whom a presentation was made on his leaving Heynes, Mathew, Ltd. (see *C. & D.*, January 8, p. 39), is joining in business Mr. John Hall, chemist, Claremount.

Christmas Trade in Cape Town was surprisingly active. The business done in photographic apparatus and supplies was unusually large, and is traced to the influence of the war and good crops.

THE G.E.A. CAMPAIGN.—Plenty of volunteers are coming forward eager to take part in the extinction of German East Africa. From the staff of Heynes, Mathew, Ltd., Messrs. L. C. Belloyer, J. E. Banks, and D. Gray, and from Petersen, Ltd., Mr. W. Patterson, have left for Potchefstroom.

RONALD COOPER, son of Mr. J. W. Cooper, J.P., chemist, Kalk Bay, recently saved the life of a sea-bather. Attempts at rescue by means of a lifebelt had failed, and young Cooper plunged into the sea and, reaching the spot where the drowning man had disappeared, dived down, brought him to the surface, and kept him supported until further assistance arrived. assistanco arrived.

#### Transvaal.

FRENCH CHALK.—A mining company in the Transvaal is in a position to make regular shipments of French chalk, tale, and soapstone, and desires to get into touch with United Kingdom importers of these minerals, who may obtain the name and address of a representative in London of the company referred to an explication to the Transca of the company referred to on application to the Trades Commissioner's Department, Government of the Union of South Africa, 90 Cannon Street, London, E.C.

SODA PRODUCTS.—The third ordinary meeting of the South African Alkali Co., Ltd., was held in Johannesburg on December 15, when the Chairman (Mr. Llewellyn Edwards), in the course of his remarks, said that at the time of the company's last meeting its practical work consisted in (a) mining, calcining, and marketing crude soda at Zoutpan; and (b) supplying a proportion of that crude product to the refining-works at Ophiston and there manuproduct to the reining-works at Ophiston and there manufacturing pure soda crystals and other valuable soda products. Both these projects, Zoutpan and Ophiston, were perfectly justifiable, and it was his strong opinion that the directors would not have been exercising their discretion had they not tried them both. Zoutpan had proved a success and Ophiston, which had proved a failure, had been closed. On September 30, 1915, Zoutpan showed a working profit of 3 5352, but a divided could not be declared as profit of 3.5357., but a dividend could not be declared as considerable leeway had to be made up. The report was adopted.

#### Things Worth Knowing. By "Hugo."

Solutions of silver salts should not be filtered through aper or cellulose. "Dissolve and decant" should be the paper or cellulose.

Spirit, æther, nit, should be kept in a bottle inverted. Loss of strength is thus greaty minimised by trapping the ethyl nitrite.

Mixtures with wholly soluble ingredients will look more elegant if strained through absorbent cotton to remove minute foreign bodies.

When dispensing apomorphine hydrochlor, in solution, all trace of alkali should be removed from the bottle. The faintest trace of alkali turns the solution "green."

Silver proteinate dissolves readily if placed in a measure and a few drops of glycerin added. Mix with a stirring-rod to a paste, then stir up with the requisite amount of

TappLoid Rhapsodies.—Frank Tapp has written a fantasia with the title "Tabloid Rhapsody." No doubt "by permission of Messrs. Burroughs & Wellcome," states a con-

Overheard in a Newport chemist's shop: "Half-a-pound of Salonika, please, for electric be'ls." The chemist, who has an interesting co'lection of funny requests, supplied the customer with sal ammoniac.

# Trade-marks Applied for.

The figures in parentheses refer to the classes in which the marks are grouped, for a list of which, with particulars as to registration, see "The Chemist and Druggist Diary," 1916, p. 365.

(From the "Trade-marks Journal," January 19, 1916.)

"MARKRIX"; for all goods (1). By J. Elliott & Sons, Bush Lane, Cannon Street, E.C. 370,409.

CLINCHER "; for chemicals for use in indiarubber solutions (1), and for goods (50). By North British Rubber Co., Ltd., Fountambridge, Edinburgh. 370,566, 366,668.

"Bridge Brand," with picture of bridge; for chemicals (2).

By R. W. Greeff & Co., Thames House, Queen Street
Place, E.C. 370,149. (Associated.)

"ALCRESTA"; for a medicine containing alkaloids of ipecacuanha (3). By the Eli Lilly Co., 210-250 East McCarty Street, Indianapolis, U.S.A. 368,822.
"Tonasene"; for a medicine for influenza, etc. (3). By F. H. Clarke, 17 Rockmount Road, Upper Norwood, S.E. 760,730.

S.E. 369,742.

"Zenodone"; for medicinal chemicals (3). By Arthur H. Cox & Co., Ltd., Brighton. 370,099.

"KINETOGEN"; for medicated wadding (3). By W. Jowett, Mellor, Marple Bridge. 370,206.
"CALOGEN"; for medicinal chemicals (3). By Heppell & Co., 164 Piccadilly, W. 370,232.
Circular label with words "Compound Terpa Tabs," etc.;

Chrcular label with words "Compound Terpa Tabs," etc.; for medicinal tablets (3). By Hough, Hoseason & Co., Bridge Street, Manchester. 370,241.
"VALERONAL"; for a medicine for sleeplessness (3). By Herm. Madoery, Leonhardstrasse 24, Basle. 370,256.
"PHOSPHONEURATE"; for medicinal chemicals (3). By M. F. Pratt, 212-214 Great Portland Street, W. 370,268. (Associated)

(Associated.)

"En-yap"; for medicines (3). By J. C. Payne and Elizabeth Davis, St. Margaret's, Cliff Road, Leigh-on-Sea. 370,452.

Pyramid shaped device, including filter, filter-papers, etc.; for filter-papers made in England (39). By J. B. Green & Son, Haylc Mill, Stocked Lane, Maidstone. 370,228.

"Vel-fin"; for indiarubber sheeting (40). By S. Maw, Son & Sons, 7-12 Aldersgate Street, E.C. 370,721.

TELAC," for dry preparations of milk (42); "CHOCOLAC," for dry preparations of milk and cocoa or chocolate (42). By the West Surrey Central Dairy Co., Ltd., 80 North Street, Guildford. 369,729, 370,476.

"ALLVECO": for desiccated foods (42). By C. Hw 14a Winchester Road, Swiss Cottage, N.W. 370,141.

"Antineuraloid"; for a food (42). By the Lecithin Co., 18 Eldon Street, E.C. 370,524.

"BRITMACO": for all goods (42). By the British Macaroni Co., 17 Water Street, Liverpool. 370,547.

"PERMUTARIS"; for goods (44). By Water Softeners, Ltd., 91 and 93 Queen Victoria Street, E.C. 366,537. (Asso-

ciated.)
"STIMMLA"; for all goods (48). TIMMLA'; for all goods (48). By Kate B. Dawson, 11 Henrietta Street, Cavendish Square, W. 369,346.

"Amaroseate" and "Erminia"; for perfumery, etc. (48)
By V. R. Wilks, 5 Clarendon Road, West Hartlepool.
370,595/598.

"Rino"; for brushes, etc. (50). By C. Stacey, 127 Myddle ton Road, Bowes Park, N. 370,333.

(From the "Trade-marks Journal," January 26, 1916.)

"Corbrook Chemica Co., Ltd., Millgate, Stockport. 370,410.
"Intramine"; for chemical substances (3). By The British Drug Houses, Ltd., 22 Graham Street, Cit Road, London, N. 370,133.

Road, London, N. 370,133.

"Creosalgen"; antiseptie for human use (3). By C. Hewlett & Son. Ltd., 35-42 Charlotte Street, Gree Eastern Street, London. E.C. 370,704. (Associated.)

"Eusalax"; aperient salts (3). By Robert Kego, chemis 287 Stonelaw Road, Burnside, Rutherglen, Glasgo 370,815. (Associated.)

"Ronix"; photographic paper (39). By L. Gevaert Compagnie, 23 Septe Straat Vieux-Dieux, Antwer Belgium. 370,844.

"Carnival."; for cocoa (42). By Cadbury Bros., Lt Bournville, Birmingham. 367,591.

"Felix"; for edible oils (42). By Price's Co., Lt: 31 Threadneedle Street, London, E.C. 370,221.

"Loxol."; for goods in Class 48. By Arthur Pow. 41 Lorne Street, Burslem. 368,635.

Trade Report.

The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers receive the goods into stock, after which much expense may be incurred in garbling and the like. Qualities of chemicals, drugs, oils, and many other commodities vary greatly, and higher prices than those here quoted are charged for selected qualities of natural products even in bulk quantities. Retail buyers cannot, therefore, for these and other reasons, expect to purchase at the prices quoted here.

### 42 Cannon Street, E.C., January 26, 6.30 p.m.

S this issue closes for press on Wednesday evening AS this issue closes for press on vectoration our Coloured further market news will be found in our Coloured Supplement. Meanwhile business in many of the fine chemicals continues quiet, the high prices asked, which involves the locking-up of capital, making buyers cautious. Generally speaking there is a fair export demand, and some good orders have been placed for Russia and other countries. Quinine is dearer from second hands owing to the 50-per-cent. advance in the bark unit. Matto Grosso ipecacuanha has also sold more freely at firmer prices to emetine makers. Japanese refined camphor continues in good demand. Menthol is quiet but firm. Persian opium is also very firm, and morphine-makers are not anxious for further business; emetine is dearer. Ammonia sulphate is lower at all ports. Sal ammoniac has again substantially advanced. Citric acid is firmer, and in good demand; tartaric acid has also sold more freely for both home and export. Cocaine continues very firm and comparatively scarce. Copaiba balsam is dearer. Among essential oils lemon is arriving freely, and is on the easier side. Clove oil is lower, and West Indian lime oil and lime the turn easier in view of arrivals; orange oil is firmer. The fixed oils like linseed, palm, soya, and crude cotton-seed, all show a weaker tendency. The principal hanges have been as under:

Higher	Firmer	Easier	Lower
Jinnamon Jopaiba balsam Imetine Juinine (see, hands) al ammoniac	Ipecaeuanha (M. Grosso) Orange oil Salol	Coeonut oil e i.f.) Cotton-seed oil (crude) Lemon oil (e i.f.) Limejuice Lime oil (W.I.) Palm oil Soya bean oil	Anumonia sulphate Clove oil Cloves Linseed oil Rape oil (Japan) Turpentine

ACETYLSALICYLIC ACID is unchanged at from 47s. 6d. per

Ammonia Sulphate is 2s. 6d. per ton cheaper all round, ondon being 16l. 17s. 6d. per ton energy an round, ondon being 16l. 17s. 6d. per ton net, naked at works, for per-cent. ammonia for prompt delivery; Hull prompt, t-per-cent, is 17l. 10s.; Liverpool is 17l. 12s. 6d.; and eith, 17l. 15s. per ton, in bags, f.o.b., less 3½ per cent. Balsam Peru.—The spot value is 21s. 6d., and for Janury-February shipment 19s. 3d. per lb. c.i.f. is quoted.

Bergamor Oil.—A Sicilian advice, dated January 15, ates that, there being few transactions, market remained most unchanged, with prices occasionally shaded a trifle.

BISMUTH SALTS continue very scarce; carbonate is offered 18s. 6d. Subnitrate has been in good demand for ussia; from 15s. 6d. to 16s. per lb. is quoted.

BROMIDES remain firm, the principal demand being for nmonium at 22s.; potassium is 25s., and sodium 18s. per lb. CAFFEINE.—Only retail lots are available, with buyers at s. per lb. Makers, however, endeavour to keep their gular customers supplied with small parcels at less.

CAMPHOR (REFINED).—The demand for Japanese has con-nued good at firm prices. The sales include 2½-lb, slabs 1s. 8½d. on the spot; also December-January shipment 1s. 8d. and April-May at 1s. 7d. per lb. c.i.f.

Cassia Lignea.—At a naval prize auction on Wednesday, 721 eases and 397 bales ex Koerber sold without reserve

with all faults at from 56s. to 60s. 6d. for fair part coarse 47s. for broken, 48s. 6d. to 53s. for partly mouldy, 45s. to 47s. for broken, 48s. 6d. for loose collected, and 46s. for loose collected and broken; 250 bales mixed with coarse sold at 43s. 6d. to 44s.

CINCHONA.—At the tender held at Amsterdam on January 19 the equivalent of 53,983 kilos, quinine sulphate was offered in the bark, of which quantity 43,208 kilos, were taken up by the quinine-makers at the average unit of 9.56c. per half-kilo, against 6.20c. at the previous auction an advance of 50 per cent. At the auction of pharmaceutical bark held on January 20 the equivalent of 3,794 kilos, quinine offered, of which 384 kilos, sold; the prices paid for the bark ranged from 34c. to 62½c. per half-kilo.

CINNAMON.—At auction 30 bales Ceylon sold with all faults, including thirds at 9d., seconds 9½d., and firsts 1s. 3d. to 1s. 4d.: 36 cases Tellicherry offered, and part sold at 9d. for fair fourths, 9½d. for fair thirds, and 10½d. for fair

CITRIC ACID has been in good demand, principally for export to Russia, and up to 2s.  $9\frac{1}{2}d$ . has been paid for quantity, with 2s. 10d. asked at the close.

CHRONELLA OIL.—The spot price of Ceylon in drums is 1s. 8d. to 1s.  $8\frac{1}{4}d$ . per 1b., and for February-March shipment 1s.  $5\frac{1}{2}d$ . c.i.f. is quoted.

CLOVE OIL is 2d. lower, English distillers offering from 5s. 2d. to 5s. 4d. per lb. as to quantity.

CLOVES are quiet and easier, with sales for Zanzibar on the spot at  $6\frac{1}{16}d$ ., and to arrive January-March at  $6\frac{1}{16}d$ . c.i.f. In auction 14 cases Penang offered, and seven sold at  $11\frac{1}{2}d$ . for good.

COCAINE remains firm and momentarily scarce, the values being from 21s. to 22s. per oz. net for hydrochloride.

CODEINE is steady at from 21s. to 22s. per oz. for the pure crystals.

Cod-Liver Oil.—Our Bergen correspondent writes on January 17 that the quotation for finest non-congealing oil is still nominal. The first attempts at the new cod-fishing is still nominal. The first attempts at the new cod-using prove that the fish is in regular condition as regards size and fatness. Writing further on January 19, our correspondent states that the exports of cod-liver oil from Norway in 1915 were 101,000 hectolitres, against 53,000 barrels in 1914, which proves that there was a larger stock at the end of 1914 than presumed at that time. It is very difficulties that the support of the conditions of the conditi cult to express any opinion of the quantity of cod-liver oil remaining in Norway at the opening of 1916, but we do not think it is less than 10,000 barrels. The winter fishing in Finmarken has been poor, owing to stormy weather. As yet there is no opening at Lofoten, but some little fishing has taken place at Vesteraalen; the ccd has also been reported at Helgeland, and appears to be in good condition. The market is quiet, but firm, at about 330s, per barrel, and no doubt there will also be a good demand this year again. Private advices from Bergen indicate that no stocks of fish or other oils were destroyed in the recent fire, which chiefly affected the commercial part of the town.

COPAIBA.—Filtered Maranham is dearcr at 2s. 4½d. per lb. on the spot.

COPPER SULPHATE.—Liverpool makes for January-February delivery are quoted at 45*l*, per ton.

CREAM OF TARTAR is firm at 185s. spot for 98-per-cent.

EMETINE.—Makers are asking 6s. 6d. per gram for hydrochloride.

EUCALYPTUS OIL is quoted at from 2s. to 2s. 3d. per lb., according to test and holder.

FORMALDEHYDE is in better demand at from 57s. to 58s. per cwt. for 40-per-cent. volume.

GINGER.—At auction 97 bags Jamaica sold, comprising small dull washed at from 75s, 6d, to 76s., being firm; 61 bags sold at from 74s, to 74s, 6d, for good medium cut Calicut, and 26s, 6d, for common small limed tips.

GLYCERIN.—It is reported that Holland has re-imposed the embargo on the exports of glycerin. Up to last week a fair quantity had been regularly received from this source. Meanwhile, the position of consumers in this country is becoming more difficult, as the Government requirements continue to grow.

IPECACUANHA.—Matto Grosso has been in good demand, up to 22s. per lb. having been paid, principally by emetine makers. Cartagena is still 16s. to 17s. per lb.

LEMON OIL.—Very fair arrivals, as is usual at this period, re taking place from Sicilian ports. The demand is, how-LEMON OIL.—Very fair arrivals, as is usual at this period, are taking place from Sicilian ports. The demand is, however, very quiet, and prices are on the easier side at from 3s. 6d. to 3s. 9d. spot and 3s. 4d. to 3s. 9d. c.i.f.

A Sicilian advice, dated January 15, states that very little business has been done for export, and only slight fluctuations have taken place. The demand having been lacking,

an easier tone has prevailed. Producers, however, prefer to hold back, in the hope of a revival in the demand, and we think, therefore, it would be difficult to purchase any important quantity at reduced prices. The future course will depend on the actual demand from consumers.

LIME-UTICE.—With fair arrivals taking place, stocks are beginning to accumulate, and this relieves the situation. Very fair quality West Indian is obtainable at 2s. 6d.

per gal.

LIME OIL.—Very fair supplies of West Indian distilled oil have arrived, and the market is, if anything, the turn easier, with ready sellers at 6s. 6d. per lb.

MENTHOL.—Quiet, at from 12s. 3d. to 12s. 6d. per lb. spot, as to brand; for January-February shipment sales include Kobayashi-Suzuki at 12s. 3d. c.i.f. Marseilles.

MINT OIL.—Japanese dementholised on spot is quiet at from 4s. 3d. to 4s. 6d. per lb., according to brand, and for December-January shipment sales have been made at 4s. c.i.f. London.

MORPHINE.—Makers are fully booked up with orders until March, and are unable to accept further business. Second-hands appear to have little or no stock, and the value of hydrochloride is nominally 13s. 3d. per oz.

OILS (FIXED).—Linseed is lower at 42s. 6d. in pipes and 43s. 6d. in barrels on the spot; January is 42s. 9d. Cotton-seed is easier at 45s. 3d. for crude in pipes on spot, 51s. for refined in pipes, and at from 52s. to 53s. for sweet refined in barrels. Ceylon Coconut is firm at 58s. 6d. for pipes and 60s. 6d. in hogsheads, both on spot; Cochin is 60s. 6d. to 62s. 6d. on spot; and London pressed is lower at 51s. 6d. and obs. 6d. in hogsheads, both on spot; Cochin is 60s. 6d. to 62s. 6d. on spot, and London pressed is lower at 51s. 6d. Ordinary brown crude Rape oil is scarce and nominal at 52s.; British refined in barrels is 54s. to 56s.; Japan in cases is 48s. c.i.f. afloat. Soya oil is 36s. 6d. for Manchurian in cases in London. Hull (spot) extracted is easier at 42s.; Lagos Palm is easier at 50s. spot, and in Liverpool 46s. is quoted for January-February.

OPIUM remains firm, the sales including Persian at 25s. 6d. per lb. for 10-per-cent., and further buyers. Turkey druggists' is quoted at from 32s. 6d. to 36s.—the latter for

Orange Oil.—A Sicilian advice, dated January 15, reports that local transactions, supported by some orders from abroad, have caused an advance in prices.

Office of Rose.—A public auction of 11 cases of Bulgarian atto of rose (naval prize) will be held on Thursday, January 27. The bulk of the offerings appear to have been shipped on consignment by a Bulgarian house to their London agents. Privately "own distillation" is quoted at 45s, per English oz., and various brands "guaranteed puro" at from 32s, to 35s.

Peppermint Oil.—American tin oil is quiet, agents offering at from 8s.  $10\frac{1}{2}d$ . to 9s. 3d. net on the spot.

PHENACETIN is quoted at from 63s, to 64s, per lb.

POPASH SULPHO-GUAIACOLATE.-It is difficult to get offers, owing to scarcity.

QUICKSILVER is steady at from 161, 12s, 6d, to 161, 15s, per

QUILLAIA.-Quiet, at from 381, to 391, per ton ex store, Liverpool.

QUINITE.—The rise of 50 per cent in the cinchona-bark unit has led to a large business on the spct at rising prices, at from 3s. 6d. to 3s. 9d. per oz. from second-hands.

SAL AMMONIAC.—Firsts lump has been advanced 10s, per cwt. to 70s., and seconds lump by 7s. per cwt. to 65s.: crushed or ground is 2s. more. Shortage of labour and the demand for firsts is the cause of the advance.

Salor is firmer: business has been refused at 45s., from 46s. to 47s. being the lowest.

SHELLAC is quiet. TN on spot offering at 80s., good at 81s., and fine 87s. 6d.; fine Orange 95s., AC Garnet 76s., and GAL at 72s. 6d. on the spot.

Soda Nitrate is strong at 16s. 6d. per cwt. for ordinary and 17s. for refined, net, on spot; in Liverpool ordinary to refined is quoted 16s. 3d. to 17s. 3d. net.

TARTARIC ACID. - A much better demand is reported on home and export account, the current spot price being 2s. 6d.

TURPENTINE is about 1s. per cwt. lower, closing at 52s. on spot, with 52s. 3d. paid for February-April.

#### Brazilian Babassu-nuts.

The Acting British Vice-Consul at Maranham writes that efforts are being made to develop an export trade in babassuare being packed for shipment to Europe. Reports are to hand that hundreds of tons of husks aro being broken up the rivers for shipment in the new year. The State of

Maranham is so rich in babassu that supplies appear to be almost inexhaustible. A firm in Maranham has arranged a suitable nut-cracking machine constructed in the United Kingdom, and is about to order a further hundred machines to facilitate the breaking of the husks.

#### Cottonseed Oil for Germany.

The Washington correspondent of the "Morning Post" gives some remarkable figures concerning the imports from the United States of cottonseed-products by the Netherthe United States of cottonseed-products by the Netherlands and Scandinavian countries. In the ten months from January 1 to October 31, 1913, Germany imported from the United States 9,898,289 lb. of cottonseed oil, the Netherlands 31,867,327 lb., and Norway 6,176,033 lb. In the corresponding period of 1915 not a single pound was imported by Germany from the United States, but the importations of the Netherlands increased to 93,153,175 lb., and those of Norway to 24,110,269 lb. In 1913 Germany imported 264,567,300 lb. of cottonseed cake and meal and none last year; in 1913 Denmark imported 613,306,653 lb., and in 1915 878,872,334 lb. Knowing how desperately hard-up Germany is for fats, and her expedients to obtain them and their substitutes, this large increase in imports by neutrals their substitutes, this large increase in imports by neutrals is significant.

#### Chinese Antimony.

H.M. Consul at Changsha, writing in regard to the possi-11.M. Consul at Changsha, writing in regard to the possibilities of export trade, states that the most interesting feature during 1914 was the prominence given to the antimony-trade as a result of the war. Up to the outbreak of the European War the export of antimony had proceeded on normal lines. When, however, it became known to all the Chinese engaged in the trade that an urgent demand had arisen in Japan, Russia, America, and the United Kingdom, and that with the expension of one or two miner. Kingdom, and that with the exception of one or two minor sources of production, the one important producing area was Hunan, the Chinese scized their opportunity, held up supplies for a time, and cornered the market. The following table shows the quantity of antimony exported from Changsha during the last four years:

		1911	1912	1913	1914
		Tons	Tons	Tons ·	Tons
Regulus	 	 1,566	2.012	2,106	2,735
	 	7.245	5,386	6,914	9.816
Crude	 	 1,245			
Ore	 	 501	680	4,169	4,672
		1	1	6.283	2,553
Ash	 • • •	 1	1	0,200	-,

### Bengal Government Cinchona.

The report of the Government cinchona plantations and factory in Bengal for 1914-15 shows a remarkable record of progress achieved since the department was reorganised ten years ago. In 1905 the maximum annual yield of quining from bark on the plantations fell short by 6,000 lb. To-day the annual demand, which then stood at 15,000 lb. To-day the actual annual output of the factory is 50,000 lb. of quinine. actual annual output of the factory is 50,000 lb. of quinine. On the whole plantation the net area under cinchona has increased from 1,737 acres to 2,552 acres. The annual possible harvest has increased from about 300,000 lb. of 2.5-per-cent, bark to 1,000,000 lb. of 4.5-per-cent, bark and this quantity is assured for many years to come. The extraction efficiency of the factory-plant has been raise from not more than 75 per cent, to 95 per cent, of the possible, while the manufactured cost of quinine has been reduced from Rs. 9 to a little over Rs. 5 per lb. (5d. per 0z. Tho quinine reserve has risen from less than 3,500 lb. tover 163,000 lb. Major Gage, the Superintendent (Cinchona-cultivation in Bengal, specially praises the Government Quinologist, Mr. G. E. Shaw.

#### U.S. Quicksilver.

According to the United States Geological Survey, the American quicksilver-industry has been active during the first six months of 1915. Up to the beginning of the withe price per flask of 75 lb. in San Francisco had reached a monthly average of \$40 since January, but August embargoes closed the important foreign sources supply, except the Italian, and the average was quoted \$80. Italian supplies could no longer be expected to oper when that country entered the war, and in June prices rose from \$80 to \$90. Some quicksilver may still expected from small surplus supplies in Mexico or of neutral countries perhaps, but otherwise the domestic mare without serious competition, and are in a position. According to the United States Geological Survey, t are without serious competition, and are in a position profit while the war lasts. The normal annual domotons unput in the serious consumption has been around 21,000 flasks, and the domoton that has been below this the consumption of the serious consumption and the serious consumption has been replaced that the serious consumption has been below this the serious consumption and the serious consumption are serious consumptions. output has been below this the past two years. Demar's now abnormal, for the manufacture of explosives leipally, and high prices will probably rule as surplus stare absorbed. The few important producers in Califo be Nevada, and Texas will find some difficulty in meeting the demand. Demar s

#### Arrivals of Chemicals, Drugs, etc.

During the period January 19 to 24, inclusive, the following produce has arrived at the English ports stated. The figures denote packages where not specifically described:

Acetic acid (R'dam) cks. 102
Acetic anhydrido (Tréport) To London. Albumen (A'dria) cs. 76 Alcohol wood (N. News) dms. Aloes (M. Bay) cs. 25 Anise (Seville) 100 Antimony ore (Townsville) bgs. 105
Arachis eil (R'dam) cks. 700
Arsenio (Paris) cs. 24
Balsams (Paris) cs. 8
Barytes sulph. (L'horn) 200
Boric acid (L'horn) brls. 177
Buchu (C. Town) bls. 2
(Cardornes (Cardon) ac. 309 Cardamoms (Ceylon) cs. 308, (B'bay) 38 Caraway seed (Holland) 335 Casein (Dieppe) bgs. 100, (B'bay) 265 Cashew-nuts (B'bay) 168, (Calieut) 57
lassia (B'bay) 25, (A'dria)
112, (Batavia) bgs. 453
lastor oil (Leghorn) cs. 80, (C'cutta) cs. 350
lamomiles (Paris) bls. 83
lemical products (Dieppe) pkgs 33, (Rouen) cs. 30. (N.Y.) pkgs. 42, (Boulogne) cs. 18 cut) 57 cs. 18
hem. prod. medicines, perfumery, etc. (N.Y.) pkgs. 166
hillies (B'bay) 41
inchona (Tuticorin) pkgs. 158,
(Ca'icut) bls. 42
innamon (Ceylon) 582,
(M'seilies) 1130 itric acid (Palermo) cks. 70 itronella oil (Rangoon) crts. 21, (Batavia) dms. 5, (Ceylon) loves (B'bay) bls. 22 2002-butter (N.Y.) es. 70 2001 conut oil (Ceylon) pkgs. 271 (Cochin) pps. 190, hds. 20, cs. 748 (Ceylon) (Trinidad) bgs. 532, (Cochin) 2,754, (Calicut) 444
tton seed (A'dria) tons 3,962, (Trinidad) bgs. 672
bebs. (B'bay) bgs. 23, (Amst.) ttlefish-bone (B'bay) 16
anamide (R'dam) kgs. 1,921
g-yolk (A'dr'a) cks. 75
sential oils (Catania) pkgs.
40, 'Messina) pkgs. 589
Amst.) pkgs. 6, (M'seilles)
s. 24, cks. 4
rina (Amst.) 100
flatin (Paris) bls. 41
(lager (B'bay) bgs. 301
(loose (N.Y.) brls. 900
(roo-thymoline (N.Y.) bxs.
33

om acacia (B'bay) bgs. 390 on damar (Batavia) cs. 59 l'aming (N.Y.) brls. 9 ley (Frisco) cs. 693, (Piræus) 3. 28

3. 28 ligo (C'cutta) pkgs. 64, chts. l. (B'bay), chts. 155, cs. 21 liper berr. (L'horn) 40 Lrel-berries (L'horn) bgs. 8 Lrel leaves (L'horn) bls. 10 Le leaves (L'horn) bis. 10 Le le leaves (L'horn) bis. 10 Lion oil (Messina) pkgs. 12, alermo) cs. 15, (Catania) cs. , see also Essential oils Liongrass oil (Cochin) dms.

L c-juice (Trinidad) renada) cks. 2 renada) cks. 241, (St. 161a) cks. 147, (Dominico) is. 318. hds. 77, cks. 293, as. 135. pkgs. 4
Lie oil (Dominica) cks. 5. dms cs. 16 (St. Lucia) cbys. 6, rinidad) cs. 11, dms. 2
Lie of (B'bay) 4,118. (C'cutta) s. 11,597 eks. 73,

s. 11,5 lorice juice (Catania) cs. ), (M'seilles) cs. 8, (Naples)

Liquoriee-root (Catania) bgs. Lime-juice cordial (Dominica) hds. 15
Lithopone (R'dam) pkgs. 293
Mineral waters (France) cs.

Nutmegs (Bombay) cs. 13

Nutmegs (Bombay) cs. 13 Nux vomica (C'cutta) pockets 163, (B'Lay) bgs. 5? Olibanum (B'bay) cs. 25 Olive oil (M'seilles) cs. 70, cks. 6, (L'horn) pkgs. 25 Opium (B'bay) cs. 163 (Mar-seilles) 30, (Naples) cs. 19 orris (L'horn) 5
Palmarosa oil (B'bay) pots 4
Pepper, black (Batavia) bgs.

รักก Perfumery (France) cs. Petrolatum (N.Y.) brls. 75 Pimento (M'seilles) 108, (N.Y.)

Potash iodide (Spain) cs. 10 Quinine sulph. (Amst.) cs. 22 Rhubarb (A'dria) es. 10
Saffron (Dieppe) es. 3
Salicylic acid (N.Y.) brls. 5
Salteylic acid (N.Y.) brls. 5
Saltatere (C'cutta) 2,920
Sandalwood (B'bay) pkgs. 175,
(Calicut) 44

(Calient) 44

Senna (Tuticorin) bls. 408

Sesame seed (A'dria) bgs. 2,546

Shellae (C'cutta) bgs. 800, cs. 530, button bgs. 58, cs. 95: garnet cs. 325

Soda hypo (N.Y.) brls. 97

Soda nitrate (Chile) bgs. 23,493

Soda prussiate (Amst.) 20 Spermaceti (Boston) bris. 85 Sulphur (Catania) bgs. 5,078, brls. 1,302

brls. 1,302
Tannie acid (N.Y.) brls. 16
Tartar (Naples) cks. 21
Tartarie acid (L'horn) cks. 158,
(Naples) brls. 232
Tragacanth (B'bay) es. 20
Turmerio (B'bay) bgs. 173
Valonea (Greece) bgs. 173
Valonea (Greece) bgs. 5,239,
(Naples) 877
Vanille (Bricae) cs. 39

(Naples) 877

Vanilla (Frisco) cs. 39

Wax, bees' (C'cutta) pkgs. 61, es. 46 (B'bay) cs. 23, (Marseilles), cs. 22; bgs. 181, bls. 382, (L'horn) bgs. 106

Wax, vegetable (M'seilles) bgs. 550

Witch-hazel ext. (N,Y) brls. 68

Zine oxide (R'dam) cks. 420

To Liverpool. Albumen (S'ghai) cs. 269
Aniline dyes (S'ghai) cs. 500
Bismuth ore (M'bourne) bgs.

Camphor ref. (Kobe) cs. 70 Castor oil (C'cutta) cs. 1,100 Cream of tartar (E'lona) kgs.

70
Drugs etc. (N.Y.) pkgs. 141
Indigo (S'pore) 15
Linseed (R. Plate) bvs. 3,597
Iithopone (R'dam) 56
Molasses (Cuba) tons 5,000
Pepper (S'pore) bgs. 205
Potash (St. John, N.B.) brls.
12

Potash iodide (Janan) cs. 5 Roots (H.-Kong) bls. 241 Shellac (C'cutta) cs. 25 Soy (H.-Kong) cks. 100 Soya beans (Janan) bgs. 560 Soya-bean oil (Kobe) dms. 38 Wax, bees' (B'lona) cs. 30, (R'dam) 18

Wax, veget. (Kobe) 25 Zinc oxide (R'dam) 230

To Manchester. Arachis oil (R'dam) eks. 60 Calcium carbide (St. John dms. 2,000 John) dms. 2,000 Farina (R'dam) bls. 300 Lithopone (R'dam) cks. 17 Phosphorus (St. Jahn) cs. 300 Soda phosph. (N Y.) brls. 62 Tanric acid (St. John) brls. 12

To Hull. Casein (France) 267 Castor seed (B'bay) bgs. 69,187 Chemical prod. cho. 202, bgs. 133 (Dunkirk) Cottonseed (B'bay) bgs. 68,248 Essential oils (Amst.) cs. 9, crts. 12 Dill-seed (B'bay) bgs, 421 Geranium oil (Algiers) ek, Glycerin (Amst.) dms, 185 Lithopone (R'dam) 28 Rape-seed (Karachi) 13 182 Soya beans (Vlad.) bgs. 77,253 Zino oxide (R'dam) 125

To Folkestone.—Drugs (France) pkgs. 14; perfumery (France) pkgs. 142. To Goole.—Farina (R'dam) 250. To Grimsby.—Chemical products (Dieppe) cks. 38; dyes (Dieppe) cks. 542. To Harwich.—Fruit essences (R'dam) pkgs. 16.

#### Heavy Chemicals.

Manchester, January 25. There has been a steady feeling in heavy chemicals during the past week, demand again running on export account. Deliveries on contract for home consumption are account. Deliveries on contract for home consumption are fairly met, notwithstanding difficulties attending transport. Bleaching-powder is nominally 15l. to 15l. 10s. per ton, but higher priecs are spoken of where deliveries over and above contract are obtainable. White caustic soda remains scarce, and prices favour sellers; 70 to 72 per cent. is quoted 16l. to 16l. 10s.; 60 to 62 per cent., 15l. 10s. to 16l. per ton. Bichromate of soda is in good inquiry at 5l. 12s. 6d. per ton, on rails, in bags. Phosphate of soda is rather firmer at 20l. per ton. Ammonia alkali is strong at 2l. 17s. 6d. to 3l. 10s. per ton, on rails. Sulphate of copper remains firm at 45l. 17s. 6d. to 46l. per ton, delivered Manchester. There does not seem to be much change in the market for raw metal. Alum is still nominally 9l. per ton for lump and 10l. per ton for ground, in bags. Sulphur is about 10s. higher on the week, and the inquiry is fair. ton for lump and 101, per ton for ground, in bags. Sulphur is about 10s, higher on the week, and the inquiry is fair. There has been a better feeling in cream of tartar and acids, prices remaining steady. White powdered arsenic quiet, though there is little change to note, notwithstanding reports of competition from the U.S.A. Permanganate of potash is higher at 4s. 9d. per lb. Potash-compounds are now rarely quoted, and where this is the case there is little change on the week. Sal ammoniac higher at 58s. to 60s., and crushed 60s. to 62s. Sulphate of ammonia closes with a shade quieter feeling at 17t. 12s. 6d. to 17t. 13s. 9d. per ton, on rails Manehester.

#### American Drug and Chemical Markets.

New York, December 31.

Trading in the general list of drugs was good for the Trading in the general list of drugs was good for the first part of the month, but towards the end the demand became quieter, due no doubt to the approach of the holiday season, and the fact that most of the houses in the trade were preparing for their annual inventory.

BAISAMS.—Peru continues in small supply and remains firm at \$5.25 and \$5.50 per lb. South American copaiba is stoody at 100 at 120.

BUCHU-LEAVES.—In limited demand, but steady at \$1.30 for short and \$1.15 for long.

BUCKTHORN-BARK is held at 50c. to 55c., stocks being ex-

Castor Oil is very scarce, and quotations are nominal at 184c. per lb. in 40-lb. tins.
Gentian.—Owing to a shrinkage in supplies dealers now

ask 19c, to 20c. Prices have been reduced to \$1.15 to

Guarana is easier. Prices have been reduced to \$1.25 for whole and \$1.20 and \$1.30 for powdered.

IPECACUANIA.—Cartagena has sharply advanced,

asking \$3.75 and \$3.85. MENTHOL continues in fair demand. Prices maintained by most dealers are \$3.25 and \$3.30, with fair sales reported

on this basis.

OFIUM.—Trade is stagnant. The gum in cases is still quoted at \$11.00, powdered at \$12.25, and granular at \$12.50.

Peppermint Oil (American).—The shrinkage in this year's yield is making for stronger prices, although \$1.90 in cases is still quoted.

SAFFRON (AMERICAN).—The advance in American saffron-flowers to \$1.25 is firmly maintained.

#### Mincing Lane and the Navy.

At the annual meeting of the General Produce Brokers' Association of London, held at the London Commercial Sale rooms on January 24, the following resolution, moved by Mr. W. W. Green, J.P., C.C., and seconded by Mr. G. H. Garrard, was carried unanimously: "The members of above Association desire to express their thanks to the Navy and the men of the Mercantile Marine, fully realising the splendid work they have done in the vectoric of our the splendid work they have done in the protection of our shipping enabling the trade of this country to be carried on so successfully. The resolution to be entered on the minutes and a copy sent to the First Lord of the Adm ralty.

### Market-prices of Drugs and Chemicals in Germany at the end of July and November 1915.

1	NO	RGA	NIC	CHI	EM1	CALS.
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-				End of July 1915. Duty paid. M. per 100 kilos.	End of November 1915. Duty paid. M. per 100 kilos.
Alum, cryst. and pow	der			 22-24	25-27
Chrome alum				65-70	85-90
Ammonia (0.910)				41-43	40-42
Ammon. carb.				140-150	320-325
Ammon. chlor. cryst.	chem.	. pure		 6065	65-70
Barium nitrate				55-60	75-80
Borax, ref. powd.				120-125	180-185
				125-130	175-180
Boric acid, ref. powd				150-155	250-260
,, ,, eryst.				 145-150	240-250
December				475-500	200-220
Description of the second				420-460	110-140
				 18-19	22-24
-1.1 . 2.1 .				 12-14	15-17
,, phosphate				20-22	22-24
G 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				75-80	85-95
Copper sulphate				67	67
Ferric chloride, cryst				4550	45-50
Ferric oxide ammoni		• • •		1,100-1,150	1.100-1.150
				85-95	9-93
Ferrous sulphate				22-24	23-25
Hydrogen peroxide, p	HILL			303-32*	303-32*
Iodine, resub.				26-274*	26-27 *
Iodide, potass.			* * *		25-26
Lithium carb.				14½-15½	
Magnesia, calc.				120-175	120-175
Magnes. carb.				48-50	48-50
" sulphate				6½-7	61-7
Mcrcuric chloride				600-620	700-720
Nickle ammon. sulph				140-150	250-275
,, sulphate				145-155	275-300
Potassium bichrom.				 105-115	190-205
" cyauide				145-165	145-165
,, ferrocyan				125-130	140-150
,, permang.		* * *		90-95	95-100
Silver nitrate				63-65*	65-67
Soda, calcined 98 to	100 p.	(°,		11-12	$10\frac{1}{2}$ - $11$
Sodium bicarb.				18-22	18-22
,, hydroxide				22-24	23-24
,, perborate				2-21*	2-24*
,, persulphate				33-4*	33-4*
,, thiosulphate				20-22	40-44
Zine chloride				 65-70	70-75

### \* Per kil .

#### PHARMACEUTICAL AND ORGANIC CHEMICALS.

			End of July 1915. Duly paid. M. per kilo.	End of November 1915. Duty paid. M. per kilo.
Acctauilide			225-250*	265-285*
1 1 1 11 12 13		• • •	 520-620*	520-620*
A - Attacamentar			 32-34	32-34
73.2			17-18	18-20
and a though			22-243	26-28
(N. 69. )			35-37	35-371
Chloral hydrate, cryst			300-320	300-320*
Chloroform, pure			145~165*	220-330*
Cocaine hydrochlaide			205-215	205-215
On take a many			625-650	640-650
(New years of the			3.60-4	3.60-4
			240-300*	240-300*
Guaiacol liq Guaiacol carb.			131-151	131-151
			18½-20½	. 18½-20½
Hexamethyleuetetran		 	1.90-5.25	4.90-5.20
			36-38	36-38
			725-750*	810-820*
			135*	165*
Morphine, hydrochlor			450-460	460-465
Paraldehydc			31-31	325-330*
Pepsin			4-41	450-500*
			$6\frac{1}{2}-7$	7.70-8.30
Pilocarpine hydrochlo			†45-50	†60–65
Quinine sulphate (Ge			391-431	50-52
	.B.V.		48-53	· 61½-64
			43-5	43-5
			260-285	260-285
		 	$62\frac{1}{2} - 65\frac{1}{2}$	$62\frac{1}{2} - 65\frac{1}{2}$
			25-26 }	30-32
			72-74	80-84
			55-60	70-72
Veratrine, purc .			155-175	185-195

<sup>\*</sup> Per 100 kilos.

				End of July 1915 Duty paid. M. per 100 kilos.	End of Nov. 1915. Duly paid. M. per 100 kilos.
Acetic acid 98 to 100 p.c.	4 - 0			115-120	· 170-180+
Acetate, lead				80-90	115-120
,, solution of alumin	nium			22-24	26-28
Acetone, pure				220-240	240-260
Amyl acetate				325-355	350-375
Benzoic acid (ex toluol)				650-675	65 <b>0-675</b>
Butyric acid 50 p.c. pure				240-260	240-260
Camphor (Japan)				750-800	750-800
Camphoric acid				18-20*	18-20
Carbon tetrachloride				86-90	140-145
Citric acid, cryst				1,400-1,450	950-1,000
Coumarin				32-35*	45-50*
Ether, pure 0.722, free fro	m exc	ise		159-169	140-150;
Formic acid 50 p.c. pure				60-62	62-65
Formaldehyde				66-70	66-70
Gallic acid				440-450	540-550
Glycerin 28°				280-300	285-300
Hydroquinone				650-660	800-850
Mannite				14-15*	17-18*
Oxalic acid				721-75	721-75
Phenolphthalein				12-14*	12-14*
Pyrogallol, pure				1.050-1.100	1,500-1,550
Resorcin, cryst				675-700	775-800
Salicylic acid, cryst				320-360	320-360
40				280-320	280-320
Sodium salicyl. cryst				380-420	380-420
Tannin, pure				360-380	400-450
Tartar, cream of, chem. p				600-650	480-500
10°1 12.		• • •		375-400	450-500
Tartar emetic			• • •	950-1,000	775-800
- l				550-1,000	825-800
from the law law has		• • •		550-575	575-600
27		• • • •	• • •	80-85*	96-100*
vanilin	• • •		• • •	00-00	30-300
-					

<sup>\*</sup> Per kilo.

#### CRUDE DRUGS.

					77 3 6	TI- 1 -6 :
					End of	End of
					July 1915.	Nov. 1915.
-					Duty paid.	Duty paid.
					M. per	M. per
					100 kilos.	100 kilos.
					245 255	7.05 100
Aloes, Cape		• • •			145-155	185-190
Aloes, Curacao					125-135	170-175 1.150-1.200
Constitution to a	1		• • •	• • •	1,150-1,200 210-220	210-220
,, Copaiba, tec	ип. А.В.V.	• • •	• • •		300-380	350-400
Dame			***		23-25*	22-23*
Malu noture	1	• • •	• • •		625-650	600-640
Calabar beans					290-310	260-280
Cascara sagrada	•••				160-170	160-170
Cassia fistula	• • •	• • •	• • •		45-60	45-60
Cassia lignea	• • •		• • •	• • •	175-185	280-290
Coca leaves, Truxillo	• • •	• • •			110-120	-
			• • •	• • •	75-85	_
Condurango bark Ergot	• • •		• • •		550-600	625-675
0 1	• • •	• • •	• • •		620-650	840-660
	• • •			• • •	150-160	160-170
Ginger, Cochin C.	• • •				135-250	165-250
Gum arabic	• • •			• • •	60-62*	65-70*
Hydrastis	• • •	• • •	• • •	• • •	38-39*	38-39*
Ipecacuanha, Rio					34-35*	36-37*
Jaborandi leaves					80-85	80-130
Jalap resin					28-30*	28-30°
	• • •	• • •			130-375	130-375
TT 1	• • •	• • •			125-150	125-150
Liquorice root, Russi	211	• • •			125-140	140-160
Lycopodium				• • •	675-700	725-750
3.1	• • •				575-600	e725-750
Matico leaves	• • •	***			125-140	140-150
3 5 13 3					33-35*	
Myrrh					150-160	150-160
Opium 10 p.c. morph					42-45 *	39-40*
Quillaia bark, cut	ine				190-200	140-150
Rhatany					75-95	75-95
Rhubarb, high dried			• • • •		300-320	280-290
Sabadilla seed					165-175	165-175
Saffron, Spanish					145-155	150-155
Saponine, crude					9-10	
Sarsaparilla, V.C.					250-280	250-28
Hondu					520-600	520-60
Senna leaves	6.00				140-160	140-16
Vanilla, Maurit.					45-50*	45-50
Zedoary					475-500	525-55
Louis J						

\* Per kilo.

SAIGON PEFIER.—The exports from New Calededuring 1914 amounted to 3.094 tons, against 4,101 ton 1 1913 and 3,593 tons in 1912. During 1914 France received 2,626 tons, Singapore 300, and Hong-Kong 100 tons.

<sup>†</sup> Per 100 grams.

#### Continental Drug and Chemical Markets.

the following notes chiefly refer to the Hamburg and thin markets under date of January 3 and 5:

LIBUMEN is firm and unchanged. Dried egg-yolk has been at m.16 per kilo. Liquid egg-yolk has met with a dy sale at m.325 per 100 kilos.

ASCARA SAGRADA is dearer, and has been sold at from 10 to m.220 per 100 kilos., but m.250 is now asked. EVADILLA remains very active, and large quantities have n sold at m.250.

TTRIC ACID remains in active demand at m.14.50 per o. for prompt.

ondurango is firmer at from m. 115 to m. 120 per 100 S.

ORMALDEHYDE.—Makers have advanced their price to 5 per 100 kilos.; the demand is large.

IVDROQUINONE has been advanced from m.6 to m.15 per

o., on account of the dcarness of raw materials. PECACUANHA is firmer. For Rio from m.44 to m.45 and Cartagena from m.41 to m.42 has been paid.

COLA is much firmer. Quarters have been sold at m.135 halves at m.130.

ACETATE has again advanced to from m.120 to m.125 100 kilos. for white large crystals, and from m.115 to

20 for small crystals and powder.

ECTITHIN is extremely scarce and has advanced to from 50 to m.200 per kilo., according to quality.

YCOPODIUM has also advanced, in consequence of scar-

\*\*COPODIUM has also advanced, in consequence of scar... Cases are quoted at from m.825 to m.840, and bags
m.815 to m.830.

IENTHOL is firmer again on increased demand; m.51 has
n paid and m.55 to m.55 is asked.

ILS (ESSENTIAL).—\*\*Star-anise is higher and the demand
increased; m.16.75 per kilo. has been paid and
8.50 is asked. Cassia has been sold at from m.10 to
1. Clove has been sold at m.20, but prices are
ected to advance. Globulus Eucalyptus is quoted at
50 per kilo. Small quantities of Ceylon Lemongrass
still be had at m.6.75. The principal owner of Japanese
t oil maintains the price at m.26 per kilo., but buyers to il maintains the price at m.26 per kilo., but buyers se to pay more than m.24.
LS (FIXED) AND FATS.—The Hungarian Home Depart-

t has commandeered all existing stocks of hempseed and hempseed. The official maximum price fixed for pseed is kr.54 per dz. The sale of rape, lin, and hempsis officially regulated.

PIASH CARBONATE.—Makers have again advanced their rs to m.45 for 80 to 85 per cent., and to m.52 per cilos. for 90 to 95 per cent.; granulated, m.55.

PIASH CHLORATE.—Technical is offered in larger quants, and is cheaper at from m.160 to m.170 per 100 kilos.

PIASH FERROCYANIDE has advanced to from m.150 to 1.5. All makers are now said to have joined the Configuration. elor

TASH PERMANG. has been advanced by the makers and crystals are quoted m.115, medium m.120, and large yals m.125 per 100 kilos.

CILLAIA.—Whole has been quite cleared, and cut is getting ragain, with sales at from m.145 to m.150 (Decemted 1, 1915).

CININE.—Makers have advanced the prices from m.56 to 1.58 per kilo. for sulphate (Ph.G. II.) from m.66 to 1.58 per kilo. for sulphate (Ph.G. II.) is m.75 to 1.1 and hydrochloride (Ph.G. V.) from m.85 to m.88 per No contracts are being made.

SECA is quoted at from m.775 to m.800 per 100 kilos.

SILLAC has been sold in large quantities, especially TN no contracts are sold in large quantities are sold in large quantities are so

5.350. German Garnet marks are sum.

2. to m.260.

5 ps.—The Austrian makers have advanced the price of ar soap by kr.34 to kr.230 per 100 kilos,; the price of ar soap by kr.34 to kr.250 per 100 kilos.

TARINDS are cheaper, in consequence of which the end has slightly increased. First black E.I. have

TARIC Acm.—The demand has again increased, and T. Por 100 kilos.

Town Acm.—The demand has again increased, and T. Por 100 kilos, has been paid.

T. MoL is still to be had in small quantities at m.80 per

UE URSI LEAVES are in active demand, in consequence UE URSI LEAVES are in active demand, in consequence of the unexpected prohibition of exportation from Austria. The tocks in Austria are said to be only small, and parcels not were destined for Germany have been held back; elected is quoted at from m.180 to m.185 per 100 kilos. V. ILLIN is offered in very small lots at from m.96 to a given kilo.

# The Uses of Amyl Acetate.

Mr. T. H. Durrans, B.Sc., contributes from the laboratories of A. Boake Roberts & Co., Ltd., Stratford, E., to the "Journal of Chemical Technology" an article dealing with the industrial applications of amyl acetate. The most important property of amyl acetate is its power of dis-solving nitro-celluloses of widely varying degrees of nitration. The solutions thus obtained yield tough, elastic and transparent films on evaporation, and the property of yielding such films is, in the main, the reason for the great success of amyl acetate. The solutions are more viscous than those in other solvents, and can be made of any degree of viscosity. These are usually known as "Dopes." Two kinds of lacquers for brass and silver ware are made, hot and cold according to whether texting is or is not necessary. of viscosity. These are usually known as "Dopes." Two kinds of lacquers for brass and silver ware are made, hot and cold, according to whether stoving is or is not necessary. A hot lacquer is usually a solution of a gum or lac in methylated spirit and, after application to the work requires to be dried by heat to prevent the deposition of moisture from the atmosphere. The boiling-point of amyl (iso) acetato is 137° C., and the flash-point is 40° C. Amyl acetate is essential for cold nitro-cellulose lacquers. The only effectual substitute is amyl formate, which, although of a lower boiling-point and higher cost, is used because of its freedom from the pear odour of amyl acetate; it has a smell recalling that of leather. Amyl acetate is an excellent solvent for gum resins, in this respect easily outstripping turpentine oil. Amyl-acetate cold lacquers are applied by dipping, brushing, or spraying, and vary mainly in the percentage of nitro-cellulose in solution and the solvent employed. Dipping-lacquers range from 2½ to 3½ per cent. of nitro-cellulose and at least 50 per cent. of amyl acetate. Brushing-lacquers, used as fillers for wood and leather, contain up to 10 per cent. of nitro-cellulose, and also sometimes gums up to 30 per cent. Spraying-lacquers contain 2½ to 3 per cent. of nitro-cellulose and a large amount of some diluent, such as benzene or petrol which will evaporate quickly and is not hygroscopic. The which will evaporate quickly and is not hygroscopic. The spraying method is used for gilding picture-frames, metallic powders being mixed with the amyl-acetate solution. Nitrospraying method is used for gliding picture-trames, metanic powders being mixed with the amyl-acetate solution. Nitrocellulose dopes or lacquers are extensively employed on the Continent and in the United States for the production of patent leather, with results far surpassing the old linseed-oil process so tenaciously adhered to in this country. Dopes are also used in the boot-trade to stiffen toecaps and to coat the eyelets and lace-holes, etc., for cementing, water-proofing, and "filling" leather, and also for backing furs, etc. An important industry is the manufacture of artificial leather and leather-cloth. Here amyl-acetate dopes are used for the best qualities, although ether-alcohol collodions are sometimes employed for the cheaper sorts. The dopes in these instances are incorporated with a mineral pigment to impart the desired colour and body to the coat and then distributed over the leather or cloth by means of rollers or brushes; the fabric may be, but seldom is, dyed previously. Another process is to prepare the nitro-cellulose film separately by drying on smooth metal plates and t cement the resultant film on to the cloth by means of glue or gum and the application of pressure. The coated cloth is then generally embosed. Spraying is also resorted film separately by drying on smooth metal plates and to cement the resultant film on to the cloth by means of glue or gum and the application of pressure. The coated cloth is then generally embossed. Spraying is also resorted to in the manufacture of leather-cloth. Leather splits are also similarly treated, and much carriage and motor upholstery is manufactured in this manner. The nitrocellulose coating has such a strengthening effect that the inferior grades of splits can be utilised economically for this purpose. Dopes also find employment in the treatment of fur, both to stiffen the hairs and to strengthen the skin. In the former case the dope is applied by means of a comb dipped in dilute amyl-acetate solutions of nitrocellulose. Metallic powders are sometimes added to simulate the appearance of silver fox, bearskin, etc. Artificial fur tails are worked up from narrow strips of fur with a thick dope on to a cord. Lacquers are extensively used for waterproofing a diversity of materials, among the me important being cloths and fabrics, cartridge-cases, wood electric insulations, and paper. Mackintoshes are in some instances produced in a similar manner. Aeroplane-wings are lacquered for the purpose of waterproofing and tightening, and also to reduce air-friction; while balloons are similarly treated to reduce air-friction; while balloons are similarly treated to reduce air-friction; while balloons are similarly treated to reduce them gastight. In the motor-industry amyl-acetate lacquers are used, as already mentioned, for the production of upholstery leather, also for the manufacture of accumulators and celluloid-covered steering-wheels, and as petrol-proof varnish and for lacquering brasswork. Straw hats and linen collars have of recent years been treated with amyl-acetate lacquers to render them waterproof and washable. Another large industry that utilises amyl acetate is the photographic and

cinematograph industry, in which lacquers are used to varnish the sensitised film side of the negative to protect it from abrasion. Mixtures of amyl acetate with other solvents are also used to cement lengths of film together, and mixtures with fatty oils are used to soften the surface of phonograph cylinders prior to cutting the record. The of phonograph cylinders prior to cutting the record. The high gloss on picture postcards is obtained by cementing a thin celluloid film on to the card by means of warm gelatin solution; hence the technical term "gelatining" given to the process. The necessary celluloid film is obtained by allowing dilute amyl-acetate lacquers to dry on plate glass. Amyl-acetate lacquers are employed in the manufacture of artificial flowers and feathers, in the coating of buttons and such articles, and also as anti-fouling paints when mixed with antisentics, such as phenols, naphthols, naphthol of buttons and such articles, and also as anti-fouling paints when mixed with antiseptics, such as phenols, naphthols, naphthaline, corrosive sublimate, arsenates, and arsenites; while medicinally they find application for the purpose of producing a protective coating for wounds. Amyl acetate is an ideal paint-stripper; although generally too costly for the purpose, its high solvent properties and low volatility enable it to remove paint and varnish with ease.

# Royal Institution.

The first Friday evening discourse of the session took place on January 21 at the Royal Institution, the Duke of Northumberland in the chair. The hour of meeting is now 5.30, but the attendance was not so large as is usual on a first night. Among those present were Sir J. J. Thomson, Sir Thomas Barlow, Mr. Robert Mond, Sir James Crichton-Browne, Professor H. E. Armstrong, Profesor Silvanus P. Thompson, Professor G. G. Henderson, Dr. C. C. Carpenter, Dr. M. O. Forster, Dr. Rudolph Messel, and Mr. E. Grant Hooper. Professor Sir James Dewar delivered the lecture, which was entitled "Problems in Capillarity." This referred to the diffusion of gases through films, and was a record of rescarch undertaken since the subject was realt with a year ago. Referring to Graham's experiments on diffusion, the lecturer explained through films, and was a record of rescarch undertaken since the subject was realt with a year ago. Referring to Graham's experiments on diffusion, the lecturer explained the simple manometric method that has been devised by which diffusion of gases through membranes can be estimated at low temperatures and at high pressures. A trap of liquid air removes all moisture from the gas with which the experiment is being conducted. Regarding the preparation of the membranes, some of Faraday's slides of thin films of gold were projected on the screen. These were mostly of a brilliant green, thinned down in various manners, and were optically examined by Faraday in a great many ways. Faraday did this work in the evening of his days, and referred to it as of the "mountain and mouse" class. How thin can the indiarubber tubes be prepared for use in these experiments, and what material is best as a support? Experiments show that a film of  $\frac{1}{20}$  to  $\frac{1}{100}$  of a millimetre supported on pure filter-paper diffuses gas easily and can be employed for high pressures. The lecturer then branched off into a consideration of soap and oil films, and dealt with the measurements obtained by Plateau Reinold and Puelers Telecurett Devices. The lecturer then branched off into a consideration of soap and oil films, and dealt with the measurements obtained by Plateau, Reinold and Rucker, Johounott, Rayleigh, and Devaux. The appearance of a central black patch on a soap film indicates the thinnest spot, and the appearance of this sign was looked upon as the dissolution of the film. Sir James showed, however, that the black film is not such an unstable thing as has been supposed. He exhibited a black film which had been kept in a bottle for three months, and in that isolated atmosphere can be regarded as a black film which had been kept in a bottle for three months, and in that isolated atmosphere can be regarded as fairly permanent. A number of experiments were undertaken to arrive at the conditions of stability of films generally, and a special piece of apparatus, on the model of Wollaston's cryophorus, was devised for obtaining permanent soap films in a vacuum. This film can then be tested for strength, and by optical means. The beautiful Newton rings from soap and oil films were projected on the screen, and then the lecturer went on to explain how thin collodion films are made. A little collodion is poured on to the surface of water, a wire ring introduced beneath it, and the film lifted out. "Some people will ask what is the practical use of this work on surface tension," said the Professor, who then referred to the fact that by utilising a difference in surface tension it will be possible to recover the Professor, who then referred to the fact that by utilising a difference in surface tension it will be possible to recover residual metals from millions of tons of tailings at the Broken Hill mines. He showed how this is accomplished by shaking up in a bottle a mixture of the powdered tailings in water to which a few drops of oleic acid was added. The zine sulphide is taken up by the froth produced, and in this simple manner 80 to 90 per cent, of the metal can be recovered from what was looked upon as a waste product. By this means also tailings containing 1 per cent, of copper are being treated in the United States. The lecturer hoped that these two uses illustrated the importance of capillary phenomena. ance of capillary phenomena.

Letters for this section should be written on one side of t'e paper only. The writer may adopt an assumed name for purposes of publication, but he must in all cases furnish his real name and address to the Editor.

The Tariff Ready-reckoner.

Sir.—A fundamental error in the Insurance Drug Tariff gives the price of drugs per avoirdupois pound of 7,000 grains. Dispensing is seldom, if ever, on this basis. The chemist sells drugs, etc., to the Insurance Committee by apothecaries' weights, 16 oz. of 480 grains or minims to the pound of 7,680 grains; but in calculating the charges on a prescription the primary factor is the price for 7,000 grains. Now, let us see what happens. The quantities in which drugs are ordered are, more or less, simple multiple or divisional parts of 480 grs. or mins. Suppose 5j. of a drug is required at, say, 48d, per pound, one's training would lead one to believe that  $48 \div 16 = 5d$ , would give the correct answer; but this is wrong; the price 48d. is for the lb. of 7,000 grs. or mins, therefore 3j. would be  $\frac{480}{70.0} \times \frac{43}{1} = 3.29d$ . Again, take 3iv. aq. chlorof. at 2d. per lb., the answer is not  $2\div 4=.5$ , but aq. chlorof. at 2d. per lb., the answer is not 2÷4=.5, but

 $2 \div \frac{4 \times 480}{1} = .55d$ . One could fill a column with illustrations of the tedious character of pricing by the Tariff method, but at present it may suffice to state that 60 per cent of prescriptions will order medicated waters or infusions in volving the above incidentals, and shows the fatal error of using a factitious 7,000-gr. lb. instead of the natural medicinal 7,680-gr. lb. Yours, etc., Yours, etc., J. Denton. Wakcfield, January 25.

Pricing and Checking Insurance Prescriptions.

SIR,—Is there any other panel chemist besides myself losing money on the dispensing-fees of Drug Tariff, 1916? The analysis of 191 prescriptions recently dispensed is:

1915. Dispensing-fees, £2 17s. 8d. Dispensing-fees, £2 10s. 7.4d. Scripts, 191

Drugs at cost and 0.8d. establishment-charge are difficult to defend, but a loss on our professional allowance is not to be tolerated. Shall we wait until the 1917 contracts are talked about, or shall we get facts now and from day to day, so that we can defend ourselves?

Yours faithfully VERB. SAP. (111/10.)

SIR,—Since writing last about the proposed ehecking arrangements, I have been reminded that in estimating the probable amount of money available there ought to be about the probable are the country of the country are also become a supplied to the country of the country are also become a supplied to the country of the co probable amount of money available there ought to u deducted from the total number of insured persons all those who have joined the Army and Navy. But, even so, a allowance of one-fifth of a penny per head should yiel something like 7,000l, per annum, and this appears a unduly large sum to pay for checking prescriptions which have already been checked at the pricing bureau. Would it not be better, especially in view of the narrowness of the pricing living living that are official superspectates the sold we allow it not be better, especially in view of the narrowness of time-limits, that an official super-checker should be allow to work continually in each prieing bureau, at the cost the Pharmaceutical Committees and under the control their representatives? Such a super-checker could engaged at a salary of two to three guineas per week, at the entire cost for the whole of England and Wales ne not be more than about 2 0001. per annum, while the rof delay in completing the work each month would reduced to a minimum. There may be difficulties in tway of such an arrangement—which need not be other the friendly—but I fail to see them. The superintendent each bureau should be glad to have an extra checker (et though an independent one) to help to ensure accuracy each burcau should be glad to have an extra cheeker (though an independent one) to help to ensure accuracy the chemists' accounts, and the chemists would have satisfaction of knowing that someone directly represertive of their interests was continually on the spot where the work of pricing was being carried on. Ahove all whole business would be kent separate and distinct figureral pharmaceutical administrative work, to the magnetic field of the separate and distinct for the separat

Buying Bottles Back. SIR,—The second-hand bottle trade used to be low upon with contempt by many superfine chemists but 11 never been averse to buving back my own bottles giving a fair price for them, always, however, reject as had contained oil. For the rest, the elcaning not a difficult matter. Half an ounce of strong hydropric acid will clean a dozen bottles containing a lime osit, and for those which are resinous a small quantity nethylated spirit will perform a similar service. There maturally, an element of satisfaction in being able to a customer that we never use anything save new teles, but in these hard times—hard not because of the cof money, but of the lack of glassware, which is certify becoming scarcer every day—even the most exclusive and money, but of the lack of glassware, which is cerally becoming scarcer every day—even the most exclusive
rmacies may think it good policy to get the servants
the big houses to save the bottles for the sake of the
all perquisite that they would furnish. Pharmacists in
ter districts have perhaps the same opportunity, for
dispensing doctor has taught his patients to expect a
tle every time, and to regard the old bottle as of little
Yours truly,

BOTTLE WASHER. (109/90.)

BOTTLE WASHER. (109/90.)

A Lord Derby Test.

IR,—I notice in your reply to "Sondh" (94/50) in the te of the C. & D. dated January 22, you say that if he reved a rejection-form from the medical officer that was the of the matter. An assistant with me presented himself enlistment under the Derby scheme in November or Deber and was rejected. In January he received a notice mether and the first batch of groups called up. Failing appearance he would be treated as a deserter. Naturappearance he was only deserted that when a man presented himself for enlistment he comatically became a soldier. To-day, January 25, he at up to barracks at 10 A.M. to straighten matters up. I was told to wait until 2.30 p.m. The time arrived in he was again informed that the board of doctors all not sit since one or two were unable to attend. In sequence there is another journey to-morrow to the tracks, which is three miles out of town. A sergeant hed to, or rather tried to, compel the man to stay at tracks all night as he was a soldier (unattested). It may be that the certificate of unfitness is not worth paper it is written on. When Lord Derby introduced scheme he never intended men to be treated like animals in not as human beings.

Long Hours of Business.

Long Hours of Business.

Long Hours of Business.

IR,—May I, through the medium of your journal, invite opinions of brother pharmacists regarding the long rs of business, especially in those pharmacies where a at amount of National Insurance dispensing is being e? The subject, I am fully aware, is one which has n discussed over and over again, but with no satisory result. As assistant and locum, I have been practifully all over the country, and found the conditions of life pharmacy anything but desirable, and decidedly controls which could be remedied. My remarks refer chiefly be business in the larger towns, and more particularly ananufacturing towns in the North and parts of Londou, we no hesitation in stating that it is high time pharmacists in these towns eame to some agreement with regard ists in these towns came to some agreement with regard as work before 5 o'clock, and goes back after his tea as work before 5 o'clock, and goes back after his tea a harder one staring him in the face. I know of be all cases where assistants have completely broken down a balth, and through nothing more than want of thought a harder one staring him in the face. I know of a leases where assistants have completely broken down a balth, and through nothing more than want of thought in he part of the employer. It is not my intention to go in details, but I would make the suggestion that employers are necessary to find time off for their assistants in general to go the day, if they cannot see their way clear to earlier long. It is always a rush at night and more or less are incompared with drawing beer the counter. Since the Lighting Act came into force that many pharmacies have closed earlier, and I know the proper consultation of the proper channels, and as a body of pharmacist I consider we are very stupid indeed to go on as a very been doing. I consider 8 p.m. quite late enough or ny pharmacy, and any Insurance prescriptions dispend after that hour should be marked "Urgent." Quite in the control of the proper control of the pharmacists. I feel that we are not being a pair of the proper control of the pharmacists. I feel that we are not being a pharmacy and I doubt very much if any better paid. How-

ever, my main contention is that 9.30 and 10 P.M. every night in the week is not at all necessary and absolutely ridiculous, and it is within the power of pharmacists to put a stop to it without any detriment to their turnover.

I remain, yours faithfully,

LOCUM. (110/17.)

### Subscribers' Symposium.

For interchange of opinion among "C. & D." readers, and brief notes on business and practical topics, especially new ideas.

Bottle-caps.

Mr. W. Walwin, chemist and druggist, Gloucester, suggests that the red paper used for backing roll-films, especially that from "Auto" films, makes a good material for bottle-caps. The paper is also useful as a base for labels for shop-bottles. We pass the suggestions on to other photographic abounds. graphic chemists.

The "C. & D." Abroad.
"Attached please find cheque for 12s. 6d., in payment for my subscription for 1916. I cannot imagine how I could get along now without your journal, and when same does not arrive regularly every week it certainly looks as if something is missing." So writes a Petrograd subscriber (179/7).

Ringworm in Horses.

"Under 'Veterinary Notes' in your issue of January 22 you give a formula for the treatment of the above disease in horses which is rather puzzling. May we, as an old firm with experience of some fifty years, respectfully suggest that our non-poisonous liquid preparation, 'Equisan,' has been in use for many years for the cure of ringworm in horses and dogs; that it is simple in application and certain in effect, its properties consisting mainly of strong tobacco with other ingredients, mostly of a vegetable matter. tobacco with other ingredients, mostly of a vegetable matter, to enable it to penetrate through the skin to ensure the destruction of the insect? "—Corry & Co., Ltd.

What Would you Charge?

"For years I have been preparing the enclosed prescription, and have had to advance the price twice within the last three months for reasons which are obvious. I would be glad to have the opinions of some of your readers as to what they consider a fair charge:

Potass, brom. Potass, iodid. Ammon. bromid. Potass. bicarb. Tinct. calumb. Glycerini ... Aq. dest. ad ... Glycerini

M. 3j. pro dos. ut dict."

Claude (108/72).

A Merry Christmas.



"This Christmas-card, done by a boy of fifteen, is rather good."-F. E. Bannister (Bloxwich).

### Legal Queries.

The majority of difficulties in regard to trade law are explained in the legal section of "The Chemist and Druggist Diary," 1916, beginning on page 341.

- J. W. R. (111/34).—The sale of "Head-powders" under that name requires no stamped medicine licence, but it is possible that you may recommend these in such a way as to require a licence. You fail, however, to give us the necessary particulars.
- J. C. (102/1).—Tincture of iodine, spirit of camphor, and tincture of capsicum cannot be made with methylated spirit unless the Commissioners of Customs and Excisc agree, and the necessary authority should be applied for through the local Supervisor of Excisc duties. local Supervisor of Excisc-duties.
- G. W. B. (111/7).—If the scale-makers are proceeding with the work on the supposition that you wanted the renewing done, we fear that you are liable to pay the damages; but you should inform them that their man quoted a price about a third less than they now ask.

Euthmol (189/15).—Registration as a chemist and druggist in Queensland is a first step towards registration as a chemist and druggist in Great Britain. The fec required Secretary and Registrar, Pharmaceutical Society, 17 Bloomsbury Square, London, W.C. The registration does not apply to Ireland.

Gee See (106/74).—It is difficult to advice you in the case that you mention, but assuming that the article has been sold by you for several years under a specific name and the identity of it can be clearly established, you have a certain right to the name and style under which the article is sold. We cannot, however, say with absolute certainty whether or not you can establish a claim to the article by legal proceedings.

Alva (110/23).—(1) An unregistered drug-store proprietor who employs a registered chemist to sell and dispense poisons for him is liable to prosecution under Section 15 of the Pharmacy Act, 1868. (2) Such proprietor cannot be entered on the dispensing panel under the National Insurance Act, but the registered chemist may be, and if so the proprietor of the business becomes liable to prosecution under Section 15. (3) The proprietor cannot use the title "chemist" or "pharmacist" without infringing the 1868 Act. (4) If the business is transferred to a limited company it cannot use the title "chemist" or carry on the business of a chemist unless a registered chemist and druggist is a director of the company. Alva (110/23).—(1) An unregistered drug-store proprictor

Carbon (95/5).—Mr. Justice Day, in deciding the case Royal College of Veterinary Surgeons v. Groves, said: "It is competent for any person, whether he is a pharmaceutical chemist or no chemist at all, to publish his views about animal medicines, and make suggestions as to what he thinks the best mode of treating them. I can see no possible objection to anything of the sort. I am not at all satisfied that because a man happens to be a chemist he is debarred from publishing a book of the kind." His Lordship proceeded to say that it was reasonable for defendant ship proceeded to say that it was reasonable for defendant in the case mentioned to use the title "veterinary snip proceeded to say that it was reasonable for detendant in the case mentioned to use the title "veterinary chemist." The judgment did not cover the use of the title "veterinary medicine specialist," but we think that it could be made to cover that title provided the user is not a veterinary practitioner, and simply carries on business as a veterinary chemist.

### Miscellaneous Inquiries.

When samples are sent particulars should be supplied to us as to their origin, what they are, what they are used for and how. We do not undertake to analyse and report upon proprietary articles nor to publish supposed formulas for them.

We do not as a rule repeat information which has been given in this section during the past twelve months, but give the reference to the issues in which the information may be found. If querists cannot refer to these, they may obtain the numbers from the "C. & D." Office at the published price, usually 6d.

E. G. (174/18).—Please note for the future that a rule of these columns is that queries should be written on a or these columns is that queries should be written on a separate piece of paper. In your case the query was written on the back of an advertisement dealt with in a department which is located on a different floor at 42 Cannon Street. The most recent book on the physiological action of drugs is the fourth edition of Dixon's "Pharmacology" (E. Arnold, 15s.).

Yorks (107/40).—According to the letter from Let Derby's Secretary, and a letter from Mr. S. Vivian in t. C. & D., December 11, p. 34, chemists, in the sense persons engaged in dispensing under the National Instance Act, are classed among those whose call to act ance Act, are classed among those whose call to act service may be postponed, and any action that you desire take must commence in association with your employ. It is understood that persons in your class who have attest are not to be called up with their group. If you are, y should at once consult your employer, who should se without delay the notice that you have received to trecruiting officer who has issued it, with a certificate static the precise occupation in which you are actually operated. recruiting officer who has issued it, with a certificate stati-the precise occupation in which you are actually engage and the name, address, and business of your employ. The recruiting officer should then provisionally cancel to notice sent to you, and if it is ascertained that yo employer's statements are correct your name will be mark in the register, or your case will be investigated by the local tribunal, the Home Office, or the Ministry Munitions.

Ajax (108/69).—There appears to be a scarcity of chlor phyll at the present time, but the difficulty is not insumountable (see C. & D., January 8, p. 78).

Dispensing Chemist (109/90).—INSURANCE DISPENSE PRICES.—Our correspondent says that "a discussion harisen as to the actual allowances that will be made, or and fees, on various articles under the new Tariff. Wou you kindly price the following articles in your next iss (cost and fees separately), that we may have expert adviupon the matter? All the items are from actual scripts. The articles are as follows, and we append the prices the medicine, with the fee in parentheses: 5vj. acid. carfluid. pure, 11.34d. (1.8d.); 3ss. guaiacol, 23.60d. (1.8d. 2 lb. malt and oil, 24.00d. (1.8d.); 2×3½ in. crèpe banda 27.00d. (0.8d.); ½ lb. boracic lint, 8d. (0.8d.); 3iv. w zinci, 4.12d. (1.8d.); ½ lb. lint, 10d. (0.8d.); ½ lb. cottonwe 5.92d. (0.8d.); 3viji. p. acid. boracic., 3.84d. (1.8d.); 6 c thyroid-gland tabs., gr. v., 10.98d. (1.8d.); 3 doz. pil. al barb., B.P., 2.01d. (1.8d.); 5xvj. emul. ol. morrh. c. hy phosph., 22.55d. (1.8d.); 3iv. gly. acid. tannic., 11c (1.8d.); ½ yard oiled silk, 5.5d. (0.8d.). on various articles under the new Tariff. Wou

#### Who Said This?

We have selected from famous authors things that have said which pertain directly or indirectly to pharm or medicine. We propose to print these week by week, we ask our subscribers to say who the authors were quotation printed last week was:

"Then they bid close your evelids.

Then they bid close your eyelids, And they mask you with a napkin, And the anæsthetic reaches Hot and subtle through your being."

This week's quotation is:

"The bottles of green and blue light Which you see in a chymist's shop-window at nigh

Tell us on a postcard who said this, giving your leand address. We shall award a copy of Wootton's "conicles of Pharmacy," in two volumes, or of "Pharmace al Fornulas," to the C. & D. subscriber or his assistant correctly gives us the names of the authors of the quoting which we publish in our issues this month, includin he Winter Issue, January 29. Replies received later that days after the quotation is published will not have prity of choice when we come to adjudicate the prize win of choice when we come to adjudicate the prize-win

# Retrospect of Fifty Years And

Reprinted from "The Chemist and Druggist," Feb. 15, 5.

Gossip.

Mr. Flooks, chemist, late of Wells, Somerset, ha menced business at Above Bar Street, Southampton.
Dr. Dauglish, whose name is identified with the facture of aërated bread, died at Great Malvern last Messrs. R. and J. R. Sturton will continue the of the late firm of John Sturton & Co., chemists an origists, Peterborough.

gists, Peterborough.

The sudden and great demand for vaccine lymp rom the supposed power of protecting cattle from the rided to the manufacture of a factitious article composition of collodion and croton oil, or tartar emetic. The string produced by this stuff, though very unlike that reference vaccination, deceived many unfortunate cattle rolling was exposed in a letter published our The wicked fraud was exposed in a letter published our great daily contemporary.

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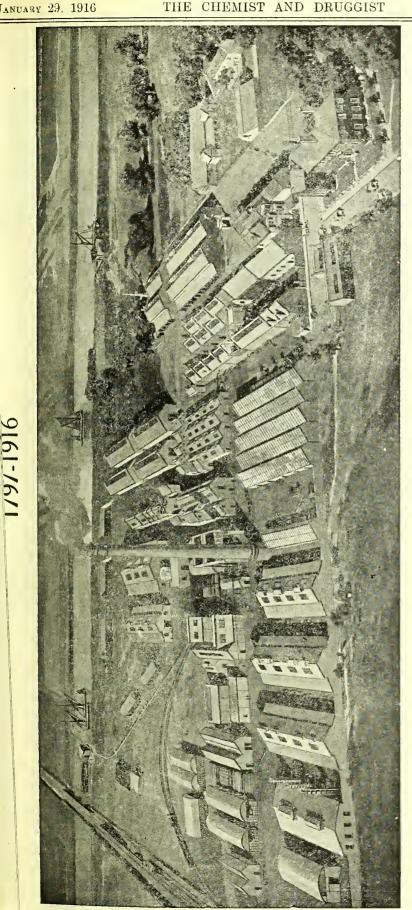


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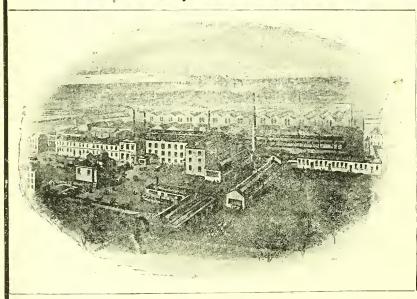
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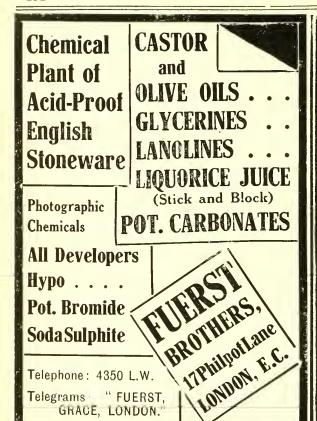
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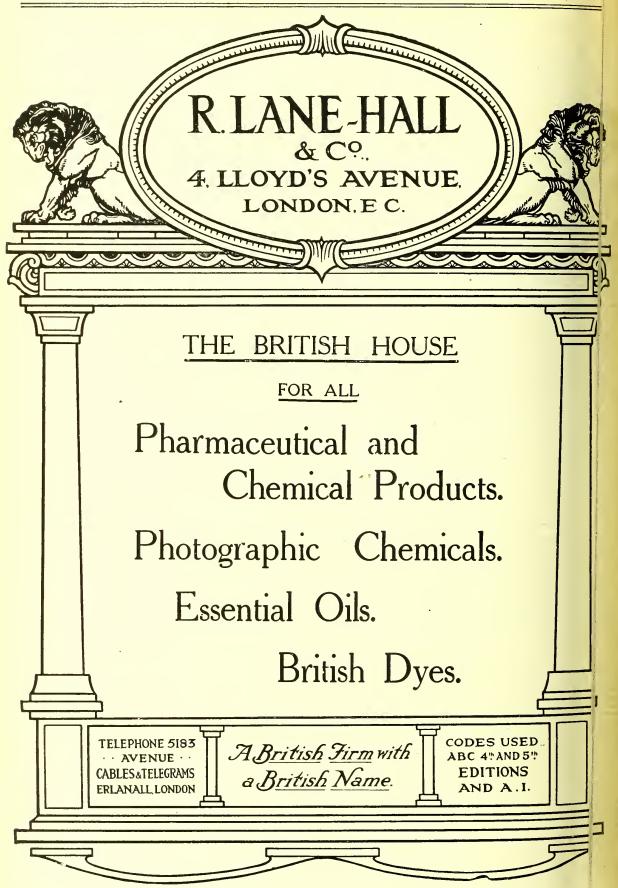
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# "McK. & R." Capsuled Pills

According to Formulas of the British Pharmacopæia and other Standard Authories

ACONITE CRYSTALS, 1-500 gr.	ALOIN OR APERIENT, No. 1.	CALOMEL CDMP., B. P. (Plummer), 5 gr
Dr. A. Dumas considers aconitine an energetic and very efficacious remedy,	Aloin, Ext. Nucis Vom., Ferri Sulph., Saponis pulv.,	CALDMEL AND DPIUM.
especially in congestive facial neuralgia. He	( Myrrhæ pulv., aa, 1-2 gr. )	Hyd. Subchlor.,
lays great stress on the necessity for a reliable preparation, and we, therefore, call particular	This formula was recommended by the late Sir Andrew Clark in the treatment of simple	CAMBUOD MOND DOCUMENT
attention to these pills.	constipation.	CAMPHOR. MOND-BROMATED, and 5 gr
ALDES, DILUTE (Dr. Hall Dinner Pill), 4 grs		CANNABIS INDICA EXTRACT, 1-4 d1-24
Aloes Barb., Pulv. Ext. Glycyrrh., Saponis pulv., Theriaca, aa, 1 gr.	Aloin, Ext. Nucis Vom., Ferri Sulph., Saponis pulv.,	CASCARA SACRADA EXTRACT, ad 3 gr
	Myrrhæ pulv., aa, 1-8 gr. ) This pill is one quarter the strength of the	This extract is prepared i our ow laboratory, and can be relied up Usefu
ALDES AND IRDN, B. P., 5 grs.	one mentioned above, but is of the same	in habitual constipation, dyspeps jaundice
ALOES AND MYRRH, B. P., 3 and 5 grs.	formula and is recommended by the same authority. It is to be given in cases where	
ALDIN, 1-10, 1-4, 1-2 and 1 gr.	"No. 1 is too strong."	( Ext. Jalapæ pulv.,
In an article on the management of Simple Constipation, the late Sir Andrew	ALOIN OR APERIENT, No 3	Hyd. Subchlor., aa, r. Ext. Coloc. Co. pulv., 11 rs.
Clark said, "If the use of drugs is unavoidable, try the aloin pill. Take one half an	Aloin, Ext. Nucis Vom.,	( Cambogiæ pulv., 1 r. )
hour before the last meal of the day, or just so much of one as will suffice to move the	Ferri Sulph, Ipecac. pulv.,	One pill will act as a laxative, a two as cathartic. Particularly applicable the earl
bowels in a natural way the next morning before breakfast. If it should produce a	Myrrhæ pulv., Saponis pulv., aa. 1-8 gr.	stages of bilious fevers, to hepai, jaundio
copious motion, or several small motions,	This pill, the third one of the series, will be found of value, where No. 2 (above) is	canal, or of the general health, with depen
the pill is not acting right; only a fourth, or even less, should be taken for a dose.	indicated, provided there is no special weakness	
When the right dose has been found it may be taken daily or on alternate days until	of the heart.  ALOIN DR APERIENT, No 4	VECETABLE).
the habit of defacation is established." Dr. Clark used aloin in combination with nux	( Aloin,	CDDEINE, 1-8, 1-4, 1 and 1 gr
vomica, iron, myrrh, etc. (See Aloin or Aperient, No. 4.)	Ext. Nucis Vom., Ext. Belladonnæ,	COLOCYNTH COMP., B.P., and 5 gra
	Ferri Sulph.,	
ALDIN COMPOUND. ( Aloin, 1-8 gr. )	Myrrhæ pulv., Saponis pulv., aa, 1-8 gr.	Pil. Coloc Comp., B. P., 318.
Ext. Belladonnæ, 1-4 gr. Podophyllin, 1-8 gr.	In cases in which the above formulas appear to act in a more or less irregular manner, and	Massa Hydrarg., grs. )
	<ul> <li>belladonna appears to be indicated, this pil will be found of service.</li> </ul>	CDLDCYNTH CDMP. AND CALOME 5 gr
ALOIN, HYOSCYAMUS, NUX VDM. AND IPECAC. (Pil. Salutis, Dr. Thomas.)	The above four fe mulas, which have been	Hyd Subchlor
	"natural" aperient, were recommended by	
Aloin,   1-2 gr.     Ext. Hyoscy.,   1-2 gr.     Ext. Nucis Vom.,   1-4 gr.     Pulv. Ipecac.,   1 6 gr.	the late Sir Andrew Clark.  ANTI-DYSPERSIA (Fothersill)	COLOCYNTH AND HYOSCYAMUS, 3, 5 gr
Pulv. Ipecac., 16gr. ) A gentle laxative and an aid to digestion;	ANTI-DYSPEPSIA (Fothergill)  (Strychnina, 1-20 gr )	CORROSIVE SUBLIMATE, 1-30, 1), 1-10 &
one at bedtime and repeat just after breakfast	Strychnina, 1-20 gr Pulv. Ipecac., 2-3 gr. Pulv. Piper Nig., 1 1-2 gr. Ext. Gentianæ, 1 gr.	DAMIANA AND PHOSPH. COMP. ( RODISIAG Ext. Turneræ Aphro., grs. )
if necessary.		Ext. Nucis Vomicæ, gr.
ALDIN AND STRYCHNINE.  Aloin, 1-5 gr. {	Recommended by the late Dr. Fothergill in his article on "Atonic Dyspepsia."	(Phosphorus, 1- gr. ) Useful in sexual debility. e, 1 or 2.
(Strychnina, 1-60 gr.)	ANTI-MALARIAL (See QUININE COMPOUND).	DICITALIN, 1-60 gr
A tonic laxative granule, prescribed for chronic constipation where a painless	APHRODISIAC (See DAMIANA AND PHDS-	DINNER (Lady Webster).
peristaltic action is desired. Especially useful in the treatment of the aged.	PHORUS COMPOUND).	Pulv. Aloes Soc., grs.
ALOIN, STRYCHNINE AND BELLADONNA.	ARSENIOUS ACID, 1-100, 1-60, 1-30 and 1-20 gr	Pulv. Mastiches, Pulv. Rosæ Gallicæ,
( Aloin, I-5 gr. )	ASAFETIDA COMP., B. P., 5 grs ATROPINE, 1-200 and 1-100 gr	One or two pills taken shortly lore a mean
Strychnina, 1-60 gr. Ext. Belladonnæ, 1-8 gr.	ATROPINE, 1-200 and 1-100 gr BLENNDSTASINE, 1, 2, 3 and 5 gr.	
A tonic laxative granule, prescribed where a painless peristaltic action is required.	An invaluable remedy in influenza and	ECTECITE OF EDBOLUTERING
	common colds. In hay fever it acts almost as a specific.	Res. Leptand.,
ALDIN, STRYCH. AND BELLADONNA COMP.	BLUE MASS, B. P., 1. 2, 3 and 5 grs.	Res. Juglandis, aa, 6 gr. Res. Cimicif., 2 gr.
Strychnina, I fo gr.	BLUE MASS, CDLOCYNTH AND HYDSCYAMUS.	( Ol. Capsici,
Ext. Rhamni Purshianæ, 1-2 gr. )	( Massa Hydrarg., 1 gr. )	EMMENACOCUE.
A laxative in habitual constipation. Dose, pill, repeated three times a day if necessary.	Ext Hyoscy., 1 gr. 2 gr. 3 grs.	Ext. Helleb. Nig.,
ALDIN, STRYCH., BELLADDNNA AND IPECAC.	CALCIUM SULPHIDE, 1-10, 1-4, 1-2 and 1 gr.	Ferri Sulph. Exsic., Pulv Aloes Soc.,
( Aloin, 1-4 gr. )	CALOMEL, 1-20, 1-10, 1-4, 1-2, 1, 2, 3 and 5 grs.	Ol Sabinas 1-4gl.
Strychnina, 1-60 gr. Ext. Bellad., 1-8 gr.	CALDMEL, COLDCYNTH AND HYDSCYAMUS.	EMMENACOCUE (Mutter)
( Pulv. Ipecac., 1-16 gr. )	Hyd. Subchlor., 1 gr	Ferri Sulph. Exsic., grs.
A prompt and efficient tonic laxative; does not gripe.	Ext. Coloc Co., 3 grs. Ext. Hyoscy., 1 gr.	Terebinthina, Aloes Soc.,

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Complete list of formulas on application

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# "McK. & R." Capsuled Pills

Acording to Formulas of the British Pharmacopæia and other Standard Authorities

DOOTII	2, 3 and 5 grs.	OPIUM POWO., 1 gr.	QUININE ANO STRYCHNINE.
RCOTI	ich pill contains the active principles		Quininæ Sulphas, r gr.
ot	grains Ergot of Rye, or 30 minims	PEPSIN, PURE, CONCENTRATED, 1 gr	Strychnina, 1-60 gr.
of	e liquid or fluid Extract.	Each pill equal in digestive properties to	Dose, 1 or 2 pills.
	0 12.	5 grs. Saccharated Pepsin.	QUININE VALERIANATES, 1-2, 1, 2 and 3 grs.
NONYN	,	PHOSPHORUS, 1-100, 1-50 and 1-30 gr.	In debility, attended with nervous dis
MANOR	COMP.	Contains the full amount of Phosphorus in	order, 1 or 2 pills may be given, two or
	onymin, I gr.	unoxidised form.	three times a day.
	in, I-4 gr. . Rhei, I gr.	PHOSPHORUS AND IRON.	RHUBARB COMP., B. P. 5 grs
1 1	. Rhei,	Phosphor. Pur., 1-50 gr.	
	. Hyoscyami, 1 gr.	Ferrum Reduct., 2 grs.	
	OUS (Blaud) 3 grs.	PHOSPHORUS, IRON AND QUININE.	Fil. Rhei Comp., 3 grs. 1 Pil. Hydrarg., 2 grs. 1
		,	SALYCILIC ACID, 2 and 5 grs
	OUS (Blaud) 5 grs.	Phosphor. Pur., 1-100 gr. Ferri Carb. (Vallet), 1 gr.	
	ri Sulphas,	Quininæ Sulph., i gr.	STROPHANTHUS AND IRON.
1 1	assii Carb.,		Pulv. Sem. Strophanthi, 1-4 gr.
DAIAU	1, 2 and 3 grs.	PHOSPHORUS AND NUX VOMICA.	Ferri Sulph., r 1-2 gr. Potassii Carb., r 1-2 gr.
(Guai	l Quinine Bisulphonate.)	Phosphor. Pur., 1-50 gr.	This pill represents Blaud's formula in
	ent in malarial fevers, anæmia,	Ext. Nucis Vom., 1-4 gr.	combination with strophanthus, and may be
	e, and as an intestinal disinfectant.	PHOSPHORUS, NUX VOMICA AND IRON.	given where a ferruginous heart tonic is
	ith much success in the treatment ged glands of the neck and for	( Phosphor. Puv., 1-50 gr. )	indicated. Dose, 1 or 2 pills.
	adenoid growths	Ext. Nucis Vom., 1-4 gr.	STRYCHNINE, 1-200, 1-100, 1-60, 1-50, 1-40
DOFO		( Ferri Carb., 1 gr. )	1-30 and 1-20 gr.
		PHOSPHORUS AND QUININE.	Dose, according to case, from 1-200 to
ON A	ENATE, 18 gr.	Phosphor. Pur., 1-50 gr.	1-20 gr.
ION C	BONATE, B. P., 5 grs.	Quininæ Sulph., 1 gr.	STRYCHNINE SULPHATE, 1-200, 1-100, 1-60,
		PHOSPHORUS, QUININE, IRON AND STRYCH.	1-50, 1-40 and 1-30 gr.
l)	TYDROCEN, 1, 2 and 4 grs.	701 1	Dose, 1-200 to 1-30 grain at bed time.
SON IC	DE (Blancard) 1 gr.	Phosphorus, 1-50 gr. Ferrum Reduct., 2 grs.	THYMOL (Thymic Acid) 2 1-2 grs
ION A	QUININE CITRATE, 2 grs.	Quininæ Sulphas., 2 grs. [	Used in cases of typhoid fever, pneu-
		(Strychnina, 1-60 gr.)	monia and pleurisy, and also as a tæni-
	NINE AND STRYCHNINE.	PHOSPHORUS AND VALER. ZINC.	fuge. Dose, two 2 1-2 gr. pills every six hours.
1 1	rum Reductum, ninæ Sulph., aa, 1 gr.	J Phosphor, Pur., 1-50 gr. [	TONIC (Dr. Aiken)
1 3	ninæ Sulph., aa, i gr. ychnina, i-60 gr.	Zinci Valer., 1 gr.	( Quininæ Sulph., 1 gr. )
		POOOPHYLLIN, 1-8, 1-4 and 1-2 gr	Acid Arseniosum, 1-50 gr.
HAAF	VECETABLE (Improved Cathartic)	· · · · · · · · · · · · · · · · · · ·	Ferrum Reduction, 2-3 gr.
( :	. Podoph.,	POOOPHYLLIN COMP.	(Strychnina, 1 50 gr. ) A valuable general tonic. Dose, 1 pill
	Hyoscy., Tarax., aa, 1-4 gr	Res. Podoph., 1-2 gr.	three times a day.
	. Coloc. Co. puly , i gr	Ext. Coloc. Co., 2 grs. 1 gr.	
	npæ pulv		TONIC-LAXATIVE (Fothergill)
1 (	Leptand., aa, 1-2 gr	POOOPHYLLIN COMP. (Dr. Janeway)	Quininæ Sulph., 2-3 gr. Strychnina, 1-30 gr.
Cor	Menth. Pip.,	Res Podophylli, 1-2 gr.	Ferrum Reduct.,
laxati	combination. An excellent	Aloe Soc., 1 gr. Ext. Bellad.,	Ext. Bellad., aa, 1-4 gr. )
	SE DINOVIOE	Ext. Nucis Vomicæ, aa, 1-4 gr.	TRIPLEX.
CDOU	2 grs.	Dose, 1 or 2 pills	(Ext. Aloes, 2 grs. )
	BINIODIDE, 1-116 gr	QUININE BROMIDE (Hydrobromate) 1, 2, 3 grs.	Res. Podophylli, 1-4 gr.
ERCU	PROTO-IOOIDE, 1-20, 1-16, 1-8 1-4 gr.	Unites the alterative effects of bromine	( Massa Hydrarg. rgr. )
		with the tonic properties of quinine.	Valuable where a cathartic is required with a peculiar action on the liver. Dose
AL LI LCA	Ut the Stomach so trequently could	Dose I to 3 grs.	with a peculiar action on the liver. Dose, 1 to 3 pills.
		QUININE MURIATE, 1. 2 and 3 grs.	
	, such as red iodide, and is not in the use of our proto-iodide.	<u> </u>	VALERIANATES QUININE, IRON AND STRYCH.
ERCH	WITH CHAIR AT 17 77	QUININE ANO CAPSICUM.	Quin. Val., 1 gr. Strych. Val., 1-60 gr.
21100	WITH CHALK, No. 1 (Hutchinson)	Quininæ Sulph, 2 grs. Pulv. Capsici, 1-2 gr.	Ferri Val.,
	frarg. cum creta, i gr. i fect. Rosæ, g. s.	Capsicism is said to assist the action of	Useful in nervous debility. Dose, r pill
		quinine. Dose, 1 to 3 pills.	three times a day.
LACO	WITH CHALK, No. 2 (Hutchinson)	QUININE BI-SULPHATE, 1-4, 1-2, 1, 2, 3, 4, 5 grs.	WARBURG TINCTURE,
1	leri puly	Bi-Sulphate of Quinine is much more	Each pill represents I fluid drachm of the
	Centiana	soluble than the sulphate, the latter requiring	tincture.
ERCII	WITH CHAIR No. 2 (Trucking	seven hundred parts of water to dissolve	WARBURG TINCTURE WITHOUT ALOES.
	WITH CHALK, No 3 (Hutchinson)	it, while the BI-SULPHATE DISSOLVES	Each pill represents a fluid drachm of the
	I lrarg. cum creta, I gr. Nucis Vom., I-4 gr.	IN TEN PARTS.	tinciure.
	rum Reductum	QUININE COMP. (Anti-Malarial)	WARBURC TINCTURE WITHOUT ALOES.
1	Gentianæ.	Quininæ Sulph.,	Each pill represents 2 fluid drachms of the
nrefo	Dreparation of manner	Cinchonid. Sulph., aa, 1 gr.	tincture.
	John John Hill Chinson	Acid. Arsenios., 1-40 gr. (Acid. Carbolic.,	ZINC PHOSPHIDE AND EXT. NUX VOMICA
URPH	MURIATE. 1-8 and 1.4 and	Menthol, aa, 1-8 g.	Zinci Phosphidum, 1-10 gr.
TRO-	(PEDIN	Capsici pulv., 1-4 gr.	Ext. Nucis Vomicæ, 1-4 gr.
MIIIC	D CAMPUOD 1-100 and 1-50 gr.	This pill is largely prescribed in the	Tonic. Useful in palsy, neuralgia and
1011	D CAMPHOR.	most severe malarial districts of America,	chronic constipation, also in brain diseases.
Ďο	(i, 1 gr. Camphoræ, 2 grs. }	with remarkable results.	Dose, 1 to 3 pills.
		QUININE SULPHATE, 1-4, 1-2, 1, 2, 3, 4, 5 grs	ZINC VALERIANATES, 1 and 2 grs.
recia	ombinations of 2 000		

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All our Catheters and Bougies in this List in Gum Elastic as well as in India Rubber, are guaranteed for sterilization at high temperatures by steam or boiling water, and also to resist the disinfectants usually employed.

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ARE PERFECTLY RELIABLE INSTRUMENTS

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Our silk web Catheters and Bougies are made of the BEST UNBREAKABLE SILK WEB, and covered with PURE GOLD COLOURED GUM ELASTIC OF HIGHEST QUALITY.

Being TRANSPARENT they admit of the immediate discovery of any impurities inside or outside.

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These Catheters and Bougies, made by a new process of our own invention, respond to the most far reaching requirements of asepsis and offer UNDENIABLE ADVANTAGES over any similar lines on the market. They are guaranteed Woven of Three PLY Specially fine silk, and are particularly well made and covered with White Elastic Material of the Very Best quality. The unsurpassed uniformly glazed surface and the Great flexibility of our white Catheters and Bougies represent the Best that can be produced in this line. The eyes of our white Catheters are large and spoon shaped, with the edges well rounded. The white colour will be of great assistance to the surgeon to discover any secretions or impurities which cannot easily be detected on articles of a different colour. The insides of our white Catheters are also covered with white elasting gum, thus rendering them quite aseptic, with the additional advantage that it is impossible for any moisture to penetrate into the Catheter. Our white elastic gum goods will never get sticky and their special composition moreover, without disadvantage to the superior quality of the instruments, permits repeated steril zation, even at a very first temperature. Owing to their great resistance to all changes of climate they are the IDEAL GUM ELASTIC ARTICLE for the TROPICS, where they will keep in perfection of the conditions being taken.

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These Catheters and Bougies which we have made according to the advice and directions of Professor LEGUE are woven from special and unbreakable silk and are covered with a new composition. They are remarkable fitheir suppleness and their resistance to injury during any form of Sterilization, especially boiling. Their metal appearance is characteristic.

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upplement to "The Chemist & Druggist" January 29th, 1916.

# POSTLIP MILLS No. 633.

Pure English Filtering Papers.

633 E for 598

633 D for 602

633 C for 604

633 A for 595

633 B for 597

# PECIALLY MANUFACTURED TO REPLACE THE BEST OREIGN MAKES UNOBTAINABLE DURING THE WAR.

Appended is a copy of the Report from The National Physical Laboratory, Teddington, to whom samples were submitted for examination and comparison with the best Foreign Papers.

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#### COPY OF REPORT

On six samples of Filter Paper sent in by Messrs. Evans, Adlard & Co., Ltd.

Five samples of white filter paper in sheets and cut circles were sent, and one sample of thin grey filtering pap in cut circles. The first five were of various kinds, suitable for different purposes. The following tests have been und aken, determination of Ash and of its constancy for each kind of paper, rate of filtration, and the ability to retain very finely wided precipitates in those cases where the description of the paper indicated that it was designed for this purpose.

The following is a statement of the purposes for which the various grades of paper are intended.

- 1. No. 633a. Medium weight and suitable for rapid filtration.
- 2. No. 633b. Heavier weight.
- 3. No. 633c. Very similar to the above.
- 4. No. 633d. \ Both suitable for retaining finely divided precipitates.
- 5. No. 633e. No. 633e is a heavier paper, filtering more rapidly than 633d.

#### Determination of Ash.

A sheet of each paper measuring  $24\frac{1}{2}^{"} \times 24\frac{1}{2}^{"}$  was divided into two equal portions and carefully ignited. The obtained in each case indicate that all the papers are very uniform in mineral content. The figures obtained for the ash of a sheet  $(24\frac{1}{2}^{"} \times 24\frac{1}{2}^{"})$  for each kind of paper are given in the table below.

	Ash per sheet $(24\frac{18}{2} \times 24\frac{16}{2})$		Ash per sheet (24½) x
No. 633a.	0.0518 gms.	No. 633d.	0.0548 gms
No. 633b.	0.0564 ,,	No. 633e.	0.0934 ,,
No. 633c	0.0594		

The corresponding figures for the sizes of filter papers in most frequent use are given in the following table.

SIZE. Diameter in			ASH II	N GMS.		
inches.	No. 633A.	Νο. 633в.	No. 633c.	No. 633D.	No. 633E.	Thin Grey
$\frac{2\frac{1}{4}}{3}$	0.00034	0.00037	0.00035	0.00036	0.00062	0.00103
$\frac{23}{4}$ $3\frac{1}{2}$	$0.00051 \\ 0.00083$	$0.00056 \\ 0.00090$	$0.00052 \\ 0.00084$	$0.00054 \\ 0.00087$	$0.00092 \\ 0.00149$	$0.00154 \\ 0.00250$
$\frac{4\frac{1}{4}}{5}$	$0.00122 \\ 0.00169$	$0.00133 \\ 0.00184$	$0.00124 \\ 0.00171$	$0.00129 \\ 0.00179$	$0.00221 \\ 0.00305$	$0.00368 \\ 0.00510$

#### Rate of Filtration.

The results of this test are very largely dependent on the method employed, and rates of filtration published without stating the method are, therefore, useless for comparison. It was therefore considered advisable to obtain of a well-known make so that by using the same definite conditions for each kind of paper, a comparison with rarticle of known quality could be obtained.

The method adopted was to use a smooth funnel of 60° fitted with an accurately folded paper of 5" diameter maintained at constant level, by an automatic arrangement, was allowed to flow through during the period of five by making a series of observations, an approximate figure for the rate of flow could be obtained. The figures we to somewhat wide variations, but as the conditions were the same for the papers submitted for test and for those comparable.

The following figures were obtained.

3 3	Approximate rate of flow through 5" paper in 5 minutes.	Similar grade from another maker.
No. 633a.	290 c.c.	240 c.c.
No. 633b.	390 c.c.	280 c.c.
No. 633c.	460 c.c.	460 c.c.
No. 633d.	200 c.c.	140 c.c.

#### lote on the rates of Filtration.

- No. 633b. The rates with this paper were particularly constant for both 633b. and the comparison paper.
- No. 663d. The papers used with this grade were of 11 cm. as this was the largest size obtainable in the comparison paper of similar grade.
- No. 663e. The rates with this paper were very variable in both cases but it is undoubtedly as rapid as the comparison paper.

#### bilit to retain fine precipitates.

series of beakers containing equal volumes of a dilute sulphuric acid solution were taken, the contents raised to the oilin point, treated with barium chloride solution and after rapidly cooling filtered through papers of Nos. 633d. and 633e. and corresponding grades of comparison paper. The filtrates were in each case perfectly clear and remained so on ashig the precipitates remaining on the filter papers.

nother and more drastic test was carried out as follows:

Gramularities of an alloy containing 82% tin and 10% antimony were treated with nitric acid evaporated to dryness and the eated with 100 c.c. of 10% nitric acid, and boiled. Without allowing the turbid solutions to settle, they were meately poured into funnels fitted with the moistened papers. When the solutions had all passed through, the recipates were washed. It was noted that papers Nos. 633d, and 633e, gave very slightly opalescent solutions, but the nou passed was of such small proportions that on long continued standing no precipitate would settle.

n only one case was an absolutely clear filtrate obtained, viz., in the case of a comparison paper similar to 633d.

peaking generally, no perceptible difference could be observed between the papers under test and those with which ney re compared in their behaviour towards the solution containing one of the most difficult substances to filter met with anytical practice. The amount of the oxides of tin and antimony so passed could be regarded as of no practical npoi nce.

10, 633a, was examined for chlorides but none could be detected. All the papers examined compare very favourably ith bse of similar characters with which they have been compared, and in most particulars, surpass them.

he amount of ash is approximately half that contained in the comparison papers.

onc sion.

he papers submitted appear to answer very fully the description indicated by the makers and to be suitable for all urpo's of filtration where the use of a paper whose ash-content has been lowered by extraction with Hydrochloric and lydr uoric acids is not regarded as essential.

Decemer 15th, 1914.

R. T. GLAZEBROOK, Director.

#### SUPPLEMENT TO REPORT ON FILTER PAPERS SUBMITTED BY MESSRS. EVANS, ADLARD & Co., Ltd.

e weights of ash for the different sizes of papers, not included in our previous report, are given in the appended table.

#### TABLE.

Diameter in inches.	No. 633A. Ash.	No. 633B. Ash.	No 633c. Ash.	No. 633b. Ash.	No. 633E. Ash.	Grey. Ash.
3	0.00061	0.00066	0.00062	0.00064	0.00109	0.00183
$3\frac{1}{4}$	0.00071	0.00078	0.00072	0.00076	0.00129	0.00215
$3\frac{3}{4}$	0.00095	0.00104	0.00096	0.00101	0.00172	0.00263
$4\frac{1}{2}$	0.00136	0.00148	0.00136	0.00144	0.00244	0.00412
$\begin{array}{c} 4\frac{1}{2} \\ 5\frac{1}{2} \end{array}$	0.00204	0.00220	0.00204	0.00216	0.00368	0.00616
6	0.00243	0.00266	0.00245	0.00257	0.00439	0.00735
7	0.0033	0.00360	0.0034	0.0035	0.0060	0.01020
$\begin{array}{c} 7\frac{1}{4} \\ 7\frac{1}{2} \end{array}$	0.0035	0.0039	0.0036	0.0037	0.0064	0.01070
$7\frac{1}{2}$	0.0038	0.0042	0.0038	0.0040	0.0069	0.0115
8 <sup>2</sup> 9	0.0043	0.0047	0.0044	0.0045	0.0079	0.0131
	0.0055	0.0060	0.0055	0.0058	0.0099	0.0165
$9\frac{1}{2}$	0.0061	0.0067	0.0062	0.0065	0.0110	0.0184
10	0.0067	0.0074	0.0069	0.0072	0.0122	0.0204
11	0.0082	0.0089	0.0083	0.0087	0.0148	0.0244
12	0.0097	0.0104	0.0098	0.0103	0.0176	0.0294
121	0.0106	0.0115	0.0107	0.0112	0.0191	0.0319
13	0.0115	0.0125	0.0116	0.0121	0.0207	0.0345
$13\frac{1}{2}$	0.0123	0.0134	0.0125	0.0131	0.0233	0.0372
$15\frac{1}{2}$	0.0163	0.0177	0.0165	0.0173	0.0294	0.0490
$17\frac{7}{2}$	0.0207	0.0226	0.0210	0.0219	0.0374	0.0626
18	0.0219	0.0239	0.0222	0.0232	0.0396	0.0662
20	0.0271	0.0295	0.0274	0.0287	0.0488	0.0817

December 22nd 1914.

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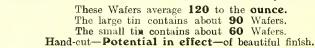
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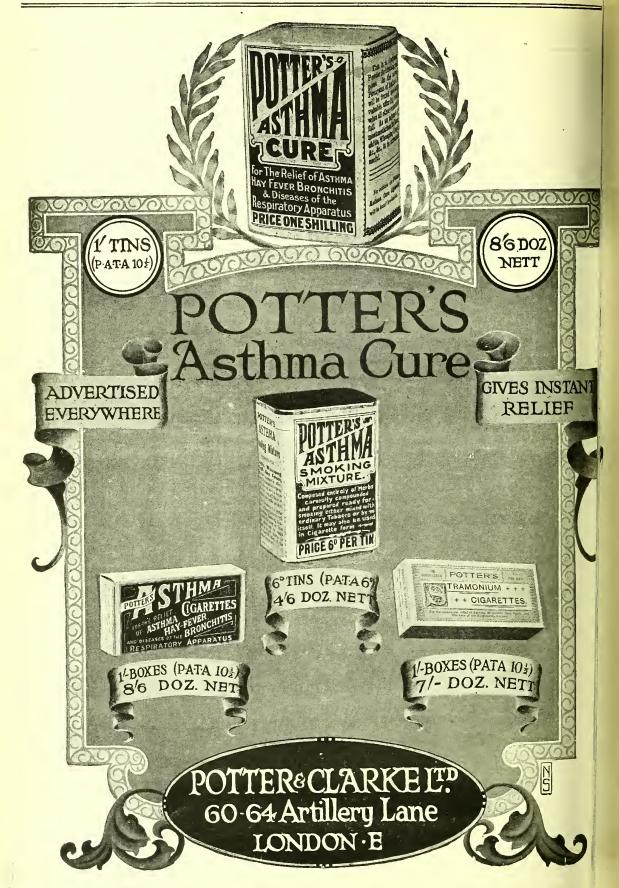
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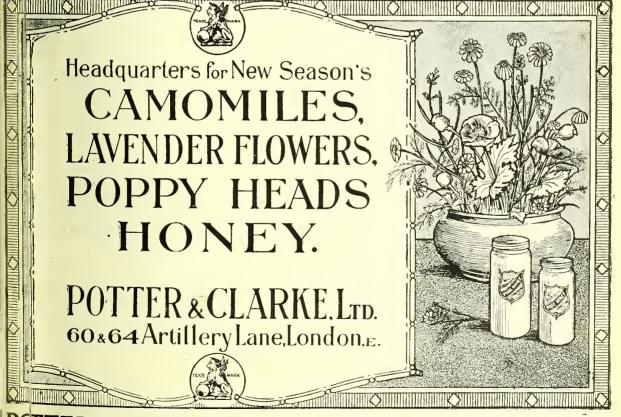


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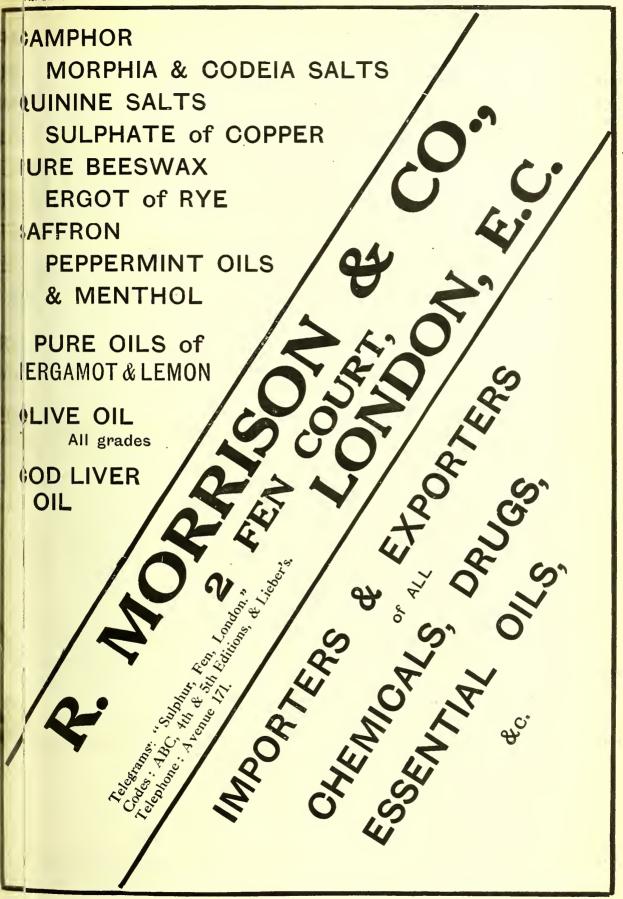
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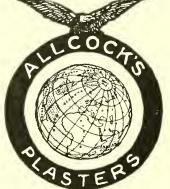
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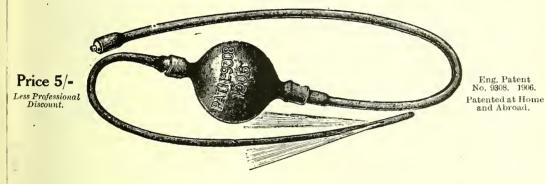
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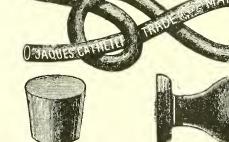
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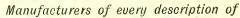


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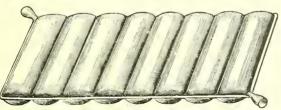
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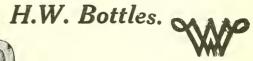


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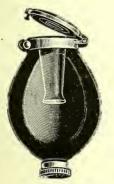
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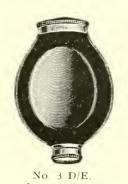
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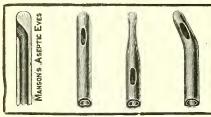
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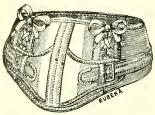
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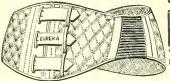
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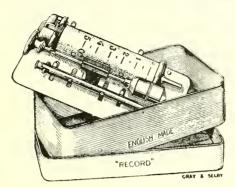
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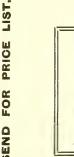
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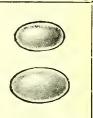
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BRITISH MAKE.



Fig. 1354.

Fig. 1194.

Fig. 1194.—The "EMPIRE," red India-rubber Air Cusnion— 14 15 16 **7 3** 19 18 10 6 6 0 Sizes  $18 \times 14$ Fig. 1354.—Air Cushion, sateen covered, reeded ... 3 10 4 4 5 Each each 4 Special Line.—Khaki-covered Pillow, 17×12 in., in khaki case with clasp ...

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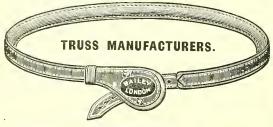
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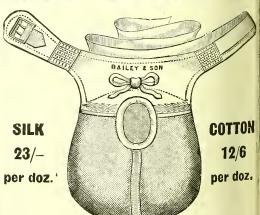
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(GERRARD'S PATENT)

WOOL - LINED

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RETAIN THE HEAT



COMFORTABLE in USE
GIVE SATISFACTION
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### IN THREE COLOURS, PINK, RED AND BLUE.

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**Enlargements** 

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Express Developing Co.,

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# MEDICAL PLASTERS

Porous Plasters,
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ADHESIVE PLASTER SPECIALLY PREPARED AND PACKED FOR EXPORT.

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Water-dressing Bandages,
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The "Leicester" Perfect Plaster-of-Paris Bandages (Patent).

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PURE LIOUORICE JUICE.

THE LANCET says:

The above brand has long been known to be of standal purity. We found the specimen to be completed soluble in water, and entirely free from impurity of any kind. It is, therefore, well adapted the pharmaceutical purposes for which it is useful, while as a popular demulcent it both safe and reliable."

To be obtained of all

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CHEMIST
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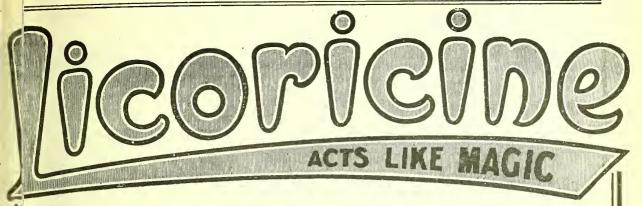
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## CURES

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We have made no alteration in the price of 2/9 size.

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MANDALL'S "RED BOTTLE"
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## Thermometer The "REPELLO"

Requires no shaking down.

Guaranteed Accurate.

A 30-Second Pushed back in an instant.

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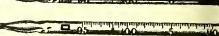
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The only Easy Reading Magnifying Clinical Thermometer on the Market,

IN FOCUS.



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The square mark engraved on lens front locates the Mercury Column immediately.

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G. H. ZEAL, 82 Turnmill St., LONDON, E.C. Wholesale Manufacturer of

CLINICAL THERMOMETERS.

A SELECTION OF 50 KINDS.

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NO EXTRA STOCK.

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oz. (9d. size)
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HANDSOME PROFIT.

Why not add to your income without trouble and without extra stock? There must be many among your customers who, known to you, wear an ARTIFICIAL LIMB or other APPLIANCE. Advise them to come to us. We are makers of the highest class of Limbs and Appliances, and no time or effort is spared to make each case a success. Simply send us a card to say that you have mentioned our name to Mr. or Mrs. of or send their name and address, and we will forward them a catalogue. In either case, should business result, we credit you with a substantial commission from 10 to 5%. according to the nature of instrument supplied, and a cheque is sent on the 1st of the month following. We should be pleased to supply you with catalogues in English, French, or German, for distribution, and give any information you may require.

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Catheters and Bougies, in Black or Brown Gum, and Finest Silk Web. Specula, Rectal and Esophageal Instruments.

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# ON PILLS & OINTMENT.

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6 oz. (5/- size) 16 oz. (12/- size) each 36 oz. (24/- size)

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**GUARANTEED** PURE.

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A NATURAL REMEDY for regulating the bowels. It acts chiefly within the intestine, is tasteless, and does not affect the stomach. IT IS NOT A CATHARTIC.

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# RED GUM PASTILLES



AN EXCFLLENT AND ATTRACTIVE CRYSTALLISED PASTILLE.

PREPARED WITH A GUMARABIC BASE, ARE BOTH PALATABLE AND EFFICACIOUS.

HANDSOME SHOWCARDS AND CARTONS SUPPLIED FREE.

PACKED IN TINS OR SHOW JARS, MAKING A SMART ATTRACTIVE WINDOW DISPLAY.

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# Prompt Sales Quick Turnover Increasing Demand Protected Price

You stock "Wincarnis" our advertising sells it is you. There is an enormous and ever-increasing demais for "Wincarnis," because is a good article backed by a powerful advertisity campaign. Don't rist losing sales through beigout of stock. Glance to your stock now.

IMPORTANT NOTE TO CHEMISTS WITHOUT LICENSES.—It has been established by law that Registered Chemists may sell "Wincarnis with Quinine" without a license.

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The Best Tonic Wine known to Modern Science.

COUNTS THEE BOTTE OF SEDNA

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It contains

Extract of Meat Best Quality.

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Finest Quality.

Chemists will thus recognise how useful SEDNA is for recuperating patients in hospitals, etc., and how invaluable it is for anyone suffering from Anæmia.

It is a genuine Pick-me-up.

30/- DOZ. (Large Bottles).

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DISORDERS of the LIVER, GOUT, Rheumatism, Diabetes, Gravel. &c.

Two or three Pastilles after each meal facilitate Digestlon

CAUTION .- Each Bottle from the STATE SPRINGS bears a neck lab with the words "VICHY-ETAT" and the name of the SOLE AGENT! INGRAM & ROYLE, Ltd., Bangor Wharf, 45 Beivedere Road, LONDON, S.I

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24/- per case of 50 large botts., or 6/- per dozen

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Satisfied customers who always want more.

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It is patriotic, and t is good business to su lant Apenta, Hunyadi ancarlsbad Waters by Chel ham Natural Aperient Wat

NATURAL THEBRITISH PRODUCT.

Packed in Cases of 24 Bottles, 9/- per dozen.

Retail price (protected) at 1/- Bottle.

Order through Messrs. INGRAM & ROYLE, MAY, ROBERTS & CO., LTD., or direct from

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# TONALKA



Is the British
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which yields you a Good Profit.

You will find TONALKA commands a large sale.

Recommended by the Medical Profession.

Sell TONALKA in place of German or Austrian Waters.

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BRANCHES-LIVERPOOL, SOUTHAMPTON, CANTERBURY.

To Aerated Water Manufacturers.

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ARE MADE FROM

# HAY'S ESSENCES

Soda Essence, Cream

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# In the Syphon

It is quality in the syphon that counts. Back-pressure puts it there.

High-pressures in the aerating cylinder won't do it. All that means is big gas bills and many syphon breakages.

It's usual to aerate to 180 to 200 lb. to leave 60 lb. in the syphon! True, but this means loss of gas-a lot of gas.

The remedy is back-pressure filling. Waters aerated to 60 lb. will show 55 lb. in syphon — a clear saving of more than 50 per cent. in CO<sub>2</sub> alone, while the lower bottling pressure reduces breakage to a minimum and ensures the supremely perfect product.

Write for particulars of "Compact" Back-Pressure Soda-water Machines.

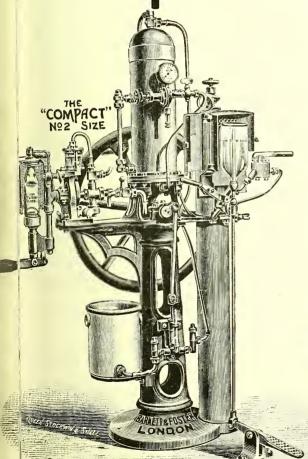
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Contractors to the War Office and Crown Agents,

Dept. O2, Niagara Works, London, N., and at BOLTON, LANCS.

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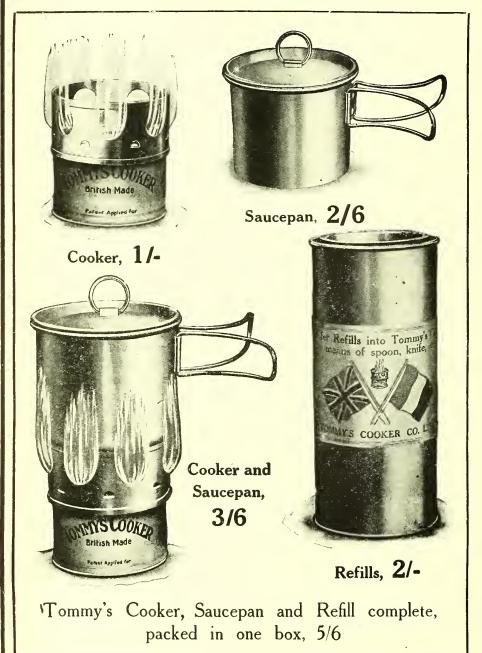
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No. 170

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THE IDEAL POCKET STOVE FOR THE TRENCHES, FOR DOMESTIC PURPOSES, TRAVELLING AND CAMPING.



IN GREAT DEMAND

3,000,000 SUPPLIED TO THE BRITISH. FRENCH AND BELGIAN ARMIES AND RED CROSS SOCIETIES.

SELLING POINTS-

- Can be carried in pocket.
- Size  $3\frac{3}{4} \times 2$  inches. Wind does not blow
- it out.
- Gives immediate and intense heat.
- Carries heavy pots or pans.
- Burns 21 hours, and with Refill 12 hours.
- Patent Drinking Cup Gratis.

EASY TO SELL AT THE FIXED CHARGES WHICH ALLOW A GOOD PROFIT.

Patent Drinking Cup Gratis.

WRITE FOR TRADE TERMS TO ORIGINAL MAKERS,

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# PARNALL & SONS SHOP MODERNISERS

ESTABLISHED 1820



SHOP FRONT CONSISTING OF GREEN AND WHITE MARBLE BASES, METAL SASHES, A MARBLE FASCIA WITH METAL LETTERING, ENTRANCE DOOR, PILASTERS, AND CORNICE, IN OAK.

# BEST INVESTMENT FOR 1916!

A smart designed Shop Front with up-to-date Interior Fittings will ensure increased trade.

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"LYSOL" EVANS' is being well advertised to Doctors and Nurse

Put up in fluted Amber Ovals, wrapped.

SHOWCARD @ LITERATURE PROVIDED.

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MADE IN ENGLAND BY

EVANS SONS LESCHER & WEBB LTD.

LONDON and LIVERPOOL.



OFFICE: 42 CANNON STREET, E.C.

SATURDAY, JANUARY 29, 1916,

### TO ADVERTISERS IN THIS SUPPLEMENT.

The Publisher desires to make it clear that advertisements of Businesses for Disposal and Wanted, Situations Open and Wanted, Exchange Column, &c., MUST BE PREPAID (except in the case of serial advertisers), and to ensure prompt insertion REMITTANCES MUST ACCOMPANY INSTRUCTIONS.

Advertisements for the current issue cannot be received after 4 p.m. on Thursday in each week. If it is necessary to telephone or telegraph an urgent announcement this may be done
PROVIDED the MONEY is TELEGRAPHED

at the same time and the fact made clear that the money order is to be aclivered at 42 CANNON STREET, LONDON, E.C. Advertisers will assist greatly in the preparation and quick despatch of the Supplement by making careful note of these rules. Telephone: No. 3617 Central (3 lines). Telegraphic Address: "Chemicus Cannon London." (Three words counted as two.)

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That is what advertisers in The Chemist and Druggist Supplement secure. Not indefinite returns from spasmodic and inflated circulation, but regular, steady success-the best possible in the Drug Trade. It gives

PUBLICITY IT PAYS TO PAY FOR. THE

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May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

1.—RTHERN SUBURB.—Brisk Retail Business, situate in say spping thoroughfare; returns average £2,500, with excelling 1 fits; attractive shop, fully stocked; price £1,250, of hich ethird could remain.

2.—IST END (Death Vacancy).—Family Retail and Dispensg Eliness; returns, present rate, £900; profits above the
perog intending purchasers with £300 at command will find
its a od investment.

TNEY (Within Easy Distance of).—Good middle-class Retail and Dispensing; capital situation in centre of light district; returns average £1,800; net profit over £350; rms, ase and goodwill £50, stock and fixtures at a fair valuausine

4.— NDON, S.E. (Residential Suburb),—Retail and Dispensing usine; no N.H.I. work; returns £900; net income about £250; rice 50, or £50 premium and valuation of stock and fixtures; ill instigation permitted.

all instigation permitted.

5.—NT (Suburhan).—Good-class Dispensing and Retail Business; ry well established and held by vendor about 8' years; starn £700; net profit one-third; roomy house with garden tach; price £450.

6.—(EAT NORTHERN MAIN LINE (Few Miles Out).—nice 500, or valuation of stock and fixtures and small premium r g, will; a good but neglected Business, returning under languent between £1,000 and £1,100; gross profit £437; ooks dited by accountant and stock taken annually.

7.—(ELSEA (Near).—Cash Retail Business, much let down,

nd i disper ELSEA (Near).—Cash Retail Business, much let down, disposal through old age and ill-health; good house,

which would sub-let; for a quick transfer something less than

which would sub-let; for a quick transfer something less than £100 would be accepted.

8.—LIVERPOOL.—Yendor retiring; very old-established Business, producing a net income of £300 yearly; several Proprietaries are included, which have a good sale; price, to include goodwill, stock and fixtures, £250.

9.—SOUTH OF ENGLAND (Death Vacancy).—Retail and Dispensing Business, including some Optical; returns average about £1,450, present rate less; net profit over £500; well-appointed shop and good house; price £1,000; every investigation courted: 10.—SOUTHERN COUNTY.—Good-class Ramily trade, with General Country Retail; old-established; returns over £900 per annum; vendor estimates value of stock and fixtures at £425; price about £500.

11.—MANCHESTER (Within Easy Distance of).—Cash Retail Business, with Optical connection; returns between £1,350 and fixtures and premium for goodwill to be arranged equitably.

12.—MIDDLESEX (Within Easy Distance of the West End).—Retail and Dispensing Business, rapidly increasing; returns, present rate, £1,500 per annum; attractive shop, fully stocked; all open to inspection; valuation and small premium only required.

13.—SUSSEX.—First-class Country connection in good district; returns exceed £800, and net profit £300; proof given; comfort; returns exceed £800, and net profit £300; proof given; comfort; returns exceed £800, and net profit £300; proof given; comfort; returns exceed £800, and net profit £300; proof given; comfort; returns exceed £800, and net profit £300; proof given; comfort; returns exceed £800, and net profit £300; proof given; comfort; returns exceed £800, and net profit £300; proof given; comfort able residence, with private entrance and small garden; practically no opposition; price £750.

14.—WILTS.—Old-established Business; has been neglected; present returns, under unqualified management, £1,000, which includes sales of Wines and Spirits; good-class locality; convenient house; valuation of stock and fixtures only required.

### VALUATIONS STOCKTAKING. FOR

Co. desire to emphasize the necessity of a Periodical Statement of Account, by which means alone Profit, the value inces, &c., can be determined. Involving as this does the labour of Stocktaking and Valuation, it is often omitted, and eventually becomes the cause of confusion and loss.

Messrs. O. & Co. are prepared to undertake these essential duties, and will make Special Terms for such services.

DRRIDGE & CO., 56 LUDGATE HILL, LONDON, E.C.

Licensed Valuers,

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Gelegrams, "Brett Leicester."

Telephone 1934.

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GIVES PERSONAL ATTENTION TO ALL VALUATIONS. NO CHARGE TO BUYERS.

AGENCY.—We have always a large number of Buyers on our books, and we can frequently find a purchaser at once. We also bave a Private Register for vendors who are in no hurry to sell, and who do not wish their businesses to be advertised.

### STOCKTAKING SPECIALISTS to the Entire DRUG TRADE.

£1,000 returns .- LONDON .- Light Family Retail and Dispensing; net profit £300; double-fronted shop, fitted by Maw's; price £400.

£1,400 returns .- SOUTH WALES .- General Light Retail, with fair Dispensing; net profit £375; price £850.

£600 returns .- LANCASHIRE .- Owner retiring after having made a competency; price £220; unusual chance for a man of limited capital.

£1,400 returns.-LINCOLNSHIRE.-Good-class prosperous market town; lease at low rent; price £800.

£1,400 returns.—LANCASHIRE.—Popular seaside resort; longestablished; good-class Retail and Dispensing; price £900.

We are fully booked up for stock takings for January.

"Valuations conducted upon the shortest notice at moderate fees.

## PARSON

MOUNTFIELD ROAD, CHURCH END, FINCHLY, N BRITISH DRUG HOUSES. Recommended by-

MEGGESON & CO., LTD. BARCLAY & SON, LTD. Tel. No. Finchley 812. All correspondence should be addressed as about

And at 174 VICTORIA ST., S.W., Ph.C. Tel. No. Vi ris W.

Valuer to Association of Manufacturing Chemists, has alnesse for Disposal on East, South, and West Coasts, besides improve others in various parts of the country.

Several Pharmacists are disposing of very desirable concerns that they may be able to join the Forces abroad. Pure person requested to send particulars of their requirement and the amount of capital they are willing to invest. No check whatever to purchasers.

amount of capital they are willing to invest. No che whatever to purchasers.
P. C. B. makes a speciality of examinations and outs on very moderate terms.
Valuations for Sale, Probate, or Account are prompt attacked to and personally conducted, whether in town or corry, all communications are strictly confidential, and correspond to the control of th invited.

Purchasers are strongly advised not to purchase at business which is not allowed to be investigated by an experien expert.

# THOS. TOMLINSON & ON

CHEMISTS' VALUERS, TRANSFER AGEN AND EXPERT STOCKTAKERS, 45a MARKET STREET, MANCHESTER. ESTABLISHED OVER HALF A CENTURY. Telegraphic Address: "Tomtom."

Price-lists, trade circulars, samples, and print matter can in no case be forwarded, the Box numb being intended exclusively for specific answers to part lar advertisements. The Publisher reserves the righ o open and refuse to forward any communications receil which he may consider contrary to this rule.

# REHIME

### VALUERS & TRANSFER AGENTS,

35 Jewry Street, Fenchurch Street, City. Telephone: 1809 CENTRAL.

### NO CHARGE TO PURCHASERS.

1.—EASTERN COUNTY.—Good-class Cash Retail, with Wines and Spirits; returning between £3,500 and £4,000, with plenty of scope for further extension; splendid position; very heavily steeked; illness sole cause of selling; price required £2,000; strongly recommended.

2.—KENT.—Unopposed good-class Country Retail, delightfully situated; returns about £1,000; books properly kept; nice house and garden; well-stocked shop; price £500; good introduction.

3.—WILTS.—Old-established General Country Retail; unopposed; returns £1.200; net profit £500; large house and garden; low rent; heavily stocked; price £700.

4.—CARDIFF.—Good middle-class Cash Retail; main-road position; returns £1,400; net profit £00t £375; good house and pharmacy; price £800, or valuation; trial allowed.

5.—MIDDLESEX.—Good-class Retail and Dispensing; pleasantly situated; returns over £1,500; net profit £400; handsome modern pharmacy, well stocked; price about £900.

6.—DEVON.—Genuine unopposed small Village Business; plenty of scope for increase; net profit £152; large house and garden; modern-fronted pharmacy; price £175; suit unqualified.

7.—LONDON, S.E.—Good-class Suburban Retail; returns £1,450; good profits; books well kept; excellent premises, well stocked; price £550, or valuation terms.

8.—NORTH LONDON.—Brisk Cash Retail; returning £1,036; net profit £350; modern pharmacy; no immediate opposition; well stocked; price £500.

8.—NORTH LONDON.—Brisk Cash Retail; returning £1,036; net profit £350; modern pharmacy; no immediate opposition; well stocked; price £500.

9.—LONDON, S.W. (Few Miles Out).—Good middle-class Business, entirely under manager; returns over £700; plenty of scope; good position; well stocked; price £275.

### STOCKTAKING V. INCOME TAX.

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DRIGIST'S and Household Store for Sale; market town, stern Counties (inland); takings £1,100, all cash; references on selling; rare chance for qualified and good worker; erms syment arranged approved purchaser. Write, "Druggist," [112], Office of this Paper.

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ADV TISER, qualified and with exceptional experience of soribing, wishes to Purchase immediately ready-money, resorting, and Proprietaries Business; shop should occupy good central particular of income, hop, in the sorie of the sories of the so

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WALL-CASE, a bargain, with own back; easily moved; very fine fitting; 10 ft. 6 in. high, 11 ft. 3 in. long, 15 in. deep; double pair heavy plate doors; bent glass cases under, over cupboards; in mahogany and maple; also a similar Fitting, 6 ft. long. Garrett-Willsher, 70 Perry Vale, Forest Hill, S.E.

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A LDERSHOT.—Unqualified Assistant; accustomed to brisk trade; unfit for military service. State particulars, with salary required (outdoors), to Orange, Chemist, Aldershot.

A LDERSHOT.—An unqualified Assistant. State particulars, with salary (outdoors), to Williams & Litchfield, Pharmacists.

A SHTON-UNDER-LYNE.—Wanted, unqualified Assistant or Junior; must be smart; no Sunday or Tnesday duty. State age, experience, and salary required, and enclose photo (to be returned), to 113/26, Office of this Paper.

BATH.-Mr. Griffin has a vacancy for an unqualified Assistant, well up in Dispensing; lady or gentleman (non-eligible); close to Pharmacy School; short hours; time for study; indoors; comfortable home.

BRIGHTON.—Good capable Assistant; knowledge Photography and simple Bookkeeping an advantage; comfortable berth; reasonable hours; age not under 25. State full particulars, salary, married, and send photo; Improver or Apprentice also required. S. Lane, Chemist, Hove, Brighton.

CLIFTON, Bristol.—Qualified Dispenser; indoors; close 7.30, Wednesdays 1 o'clock; no evening duty. Apply, stating age, experience, and salary required, to Giles, Schacht & Co.

CROMER.—Assistant wanted for Retail and Dispensing business (male or female); qualification not absolutely necessary; hours short; comfortable home if indoors; now vacant. Apply, Dulley, Chemist, Cromer.

DERBY.—Experienced unqualified Assistant (comfortable permanency in view) is invited to correspond with E. Ashley, Ltd., Cheapside, Derby.

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EXETER.—Qualified Pharmacist required; not eligible for the Army; permanency for suitable man; good hours, and a most comfortable berth; indoors. Apply, with full particulars, in first letter, to Stone & Son, Ltd., Exeter.

XETER.—Wanted, unqualified Assistant; efficient Dispenser, Counterman, and Stockkeeper; three kept; age immaterial if references are right. Experience, salary required (outdoors), to Mr. Reid, 2 Queen Street, Exeter.

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ONDON.—Assistant (unqualified), ineligible for Army, with Dispensing experience: outdoors. Apply, stating particulars as to age, experience, and salary required, Greenish & Co., 20 New Street, Dorset Square, N.W.

L ONDON, N.—Competent Assistant; salary £65 indoors or £104 outdoors, whichever preferred; also a good Junior; hours 8.30 to 9.30; usual half-holiday. Apply, by letter only, giving full particulars as to experience, names of references, and when disengaged, "Chemist," 115a Stoke Newington Road, N.

ONDON. N.—Wanted, a competent gentlemanly Assistant, accounts one do high Retail and Dispensing business, as soon as possible; outdoors; easy hours and light duty. T. E. Savage, Broadway, Crouch End, N.

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ONDON, N.—Part time or evenings; unqualified. Apply, with full particulars, "Camphor" (195/35), Office of this Paper.

LONDON, S.E.—A young Junior Assistant for a quick Retail and Dispensing business; outdoors; time for study if required. Apply, by letter, or personally after 6 p.m., The Prosser Roberts Co., Pharmaceutical Chemists, 323 Walworth Road, S.E.

LONDON, S.W.—Assistant; outdoors; hours 9 to 9 p.m., Saturdays 9 to 10.30; no Sunday duty; salary £2 10s. weekly. Full particulars, and when disengaged, to 194/33, Office of this Paper.

LONDON, S.W.—An Assistant of good Dispensing experience required. Apply to A. J. Phillips, 156 Cromwell Road, S. Kensington, S.W.

LONDON, W.-Wanted, for Wednesday mornings, 9.30 to 1, for Dispensing and Counter. Usual particulars to Walsham, Pharmacist, Hanwell, W.

I ONDON, W.—Wanted immediately, Improver or Junior for putting up orders in Wholesale Warchouse; hours 8 to 6, Saturdays 1 clock. Apply, personally or by letter, to Hospitals and General Contracts Co., Ltd., 19-35 Mortimer Street, W.

I ONDON, W.C.—Lady Assistant (qualified) for brisk N.H.I. and medium-class Retail; must be quick and accurate. Kiodly state age, particulars of previous experience, and salary required (outdoors), Waterhouse, Chemist, 18 Exmouth Street, Clerkonwell, W.C. 'Phone, Central 3607.

I ONDON, W.C.—Assistant, qualified or unqualified. Apply, stating age, references, and salary (outdoors), to R. S. Starkie, Grand Hotel Buildings, Trafalgar Square.

MAIDSTONE.—Unqualified Assistant for good-class Dispensing and Family business; incligible for military service; indoors or outdoors. Apply, with all particulars, age, height, experience, salary required, photo, etc., to Corfe & Son, Chemists, Maidstone.

MANCHESTER.—Elderly qualified Assistant requir mosts for N.H.I. Dispensing; comfortable permanency; or born. State when at liberty and salary required, 194/24, 0ft of the Paper.

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PLYMOUTH.—Assistant for middle-class business; (fortall situation (outdoors); Dispensing, Counter, and ik; me gressive Salary to suitable man. Give full particulars below commencing salary required, to 191/18, Office of this uper.

SHEFFIELD.—Junior; 20-23; outdoors; Cash and Pl graphic trade. Kindly give full particulars, in first lef, H. 6 Williams, 118 The Moor, Sheffield.

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SPALDING.—Wanted, Assistant (gentleman or lady at one Apply, giving particulars of experience, salary re-red, and references, to Donington & Co., Chemists, Spalding.

TAUNTON.—Unqualified Assistant wanted for goods Retained and Dispensing business; in- or out-doors. Apr stating full particulars, to Gregory & Wrenn, Ltd., Chemists, anton.

YORKSHIRE (West Riding).—Qualified Manager ried for progressive Cash business; must be about 45 y so far and be capable and energetic; permanency; inter in the profits offered. "Yorks" (194/242), Office of this left.

A LSOP & QUILLER, 137 Sloane Street, S.W., wire as ineligible for military service preferred. Apply to "W," as above.

A SSISTANT as Second; lady or gentleman with g experience; hours approximately 9 to 8.30, We sdays 1 Sundays 3 hours every third; outdoors. State full to Arnold Roberts, 171 High Street, Acton, W.

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CURTIS & CO. have a vacancy for an Assistant, bout 24 Apply, with particulars, to W. Jameson, c/o Cl. s & Co. 48 Baker Street, Portman Square, W.

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ady sistant for Chemist's business; 30s. per week; permancy; must be capable Dispenser. State age and when uberty 194/241, Office of this Paper.

ANACR (qualified) requires position; present berth 3 years, prevus ones 9, 7, and 5 years, all with excellent referes; ju over military age; married. G. E. Rose, M.P.S., well treet, Hackney, London, N.E.

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ESSR TIMOTHY WHITE CO., LTD., Chemists, Portsmouth, reque a capable Pharmaeist as Manager; easy hours; good progresive salary, with excellent prospects.

ART ME; very central; suit Student; sleep on premises. Parulars to "Ajax" (112/67), Office of this Paper.

HARN CEUTICAL SOCIETY OF IRELAND.—The Council of this ociety will, on February 8, 1916, proceed to the onthe of an Examiner for the Practical Pharmacy Division he Ph maceutical Licence Examination, subject to the approval His Edlency the Lord Licutenant and the Privy Council of and, all particulars will be supplied by the Registrar, with manipations should be lodged not later than February 1, 5, Aur T. Ferrall, Registrar, 67 Lower Mount Street, lin.

UALLED Manager, about 30; house accommodation for marr man; also capable Junior (military ineligible), loors, out 23, required for good-class Retail and Dispensing mes. ddress usual particulars, enclosing photo if convenient, P. Woruff, Pharmacist, Hazel Grove, Cheshire.

UALL ED Chemist required for Dispensing duties; quick and acoute; incligible for Army; permanency. State age, menoi salary required, and fullest particulars of experience, danag Junior Army and Navy Stores, Ltd., Aldershot.

UALL ED Manager for high-class business at fashionable seas resort; married or single; to live on premises; class commodation; must have good knowledge of Photophy of Optical trade; salary £182 per annum and comion. ply, giving full particulars in first letter, with photorecent references, to 193/200, Office of this Paper.

UALI ED Manager wanted; incligible; small middle-class bus ss; some N.H.I.; outdoors, or house over shop to able in: references must be good; comfortable berth. ite, 14 High Street, Borough, S.E.

UALL ED Junior (lady or gentleman) for Pharmacy in South Coas health resort; easy hours; gentleman ineligible for tary rvice preferred. Apply, giving full particulars, age, ty red (outdoors), etc., to "L." (113/41), Office of this

NQUEFIED Assistant as Managing Senior in good-class busiss; hours 8.30 to 7, half-day weekly; light Sunday 9; m have good knowledge of photography; salary £130 annu Apply, with full particulars, photo, and copy of ant te nonials, to 193/2. Office of this Paper.

ANYO, young lady with some experience in the Retail and Distained, for small Country business; short hours and to will have been particulars and salary to olu 91.8), Office of this Paper.

JANI), evening Dispenser by North London Doctor living pen ride from Bank; state age, experience, sex, salary ured, apply, 194/25, Office of this Paper.

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NAL ICAL Assistant wanted in the Laboratory of a London Whisale and Manufacturing Druggist. Replies, stating and perience, to 195/30, Office of this Paper.

A SSISTANT; Wholesale Druggists' Sundries; able to Travel; some experience; single, ineligible preferred; good training given; references required; Midlands. Apply, 194/34, Office of this Paper

MINERAL Waters.—Wanted, by a firm of Chemists in the Midlands, a man who has had experience in the Mineral Water and Syphon trade and the Chemist's business generally. State wage, experience, etc., to "Midland" (184/6), Office of this Paper.

PILLS.—A London firm has a vacancy for a thoroughly experienced Pillmaker. Write full particulars of age, experience, and wage required, to 192/23, Office of this Paper.

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REPRESENTATIVES on commission for Scotland, Ireland, and Northern Counties of England for a real reliable Trench Vermin Killer; shows the Chemist a good profit, and is absolutely reliable, and should prove a very profitable Side-line to a pushing man. "Glyta" (194/7), Office of this Paper.

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WANTED (at once), Wet-counter hand, by Wholesale firm. State experience and wages; also Errand-boy, able to cycle. 196/1, Office of this Paper.

WET Counter.—Experienced man wanted; good wages and permanency. Apply, "C. S." (173/7), Office of this Paper.

WET-FLOOR hands required. Apply, stating salary required, to Willows, Francis, Butler & Thompson, Ltd., 40 Aldersgate Street, E.C.

WET- and Dry-Counter hands wanted immediately. Apply, personally or in writing to Hospitals and General Contracts Co., Ltd., 19-35 Mortimer Street, W.

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A DVERTISER (over military age), at present holding responsible Managership, desires to Represent good Drug house over West of England; to commence about Easter. 194/32, Office of this Paper.

AN elderly registered Chemist, still all right mentally and physically, desires a situation in a quiet healthy country place; comfort more desired than a big salary. 191/16, Office of this Paper.

A NY part of globe; M.P.S., F.S.M.C.; military ineligible; 30; healthy; married, would live apart; travel or settle; previous Colonial experience; responsible post with good salary; would learn language; good references. 189/19, Office of this Paper.

AS Manager, etc., in Light Retail; elderly qualified man; active, reliable; varied experience. State full details, salary offered, etc. (no Sunday duty), "Aspirin" (191/22), Office of this Paper.

AS Manager; tall, active; Minor; middlc-aged. Lambert, Merton Road, Southfields, S.W.

A SSISTANT, Manager, or Locum (ineligible Army), married, desires post; Retail, Dental, Dispensing experience; disengaged February 5. "Alpha," Norfolk House, Shanklin, I.O.W.

A SSISTANT; unqualified; 33; married; Dispensing experience. Innes, 106 Dorchester Road, Weymouth.

A SSISTANT; unqualified; 25; tall; married; good experience; Yorkshire preferred, not essential. 193/32, Office of this

A SSISTANT (25), excellent record, desires post; London, high olass. "Mac," 37 Rosebery Gardens, Crouch End, N.

DISPENSING; evenings; qualified; Hospital experience; Hamp-stead, Golder's Green, or N.W. London; Doctor preferred. Miss Gayton, 22 Wycombe Gardens, Golder's Green.

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EXPERIENCED, reliable Locum; 50; single; abstainer; excellent references; unregistered. "Statim," 48 High Street, Uxbridge, Middlesex.

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IMPROVER desires position in West; hours off for stu B. Greene, 41 Frithville Gardens, Shepherd's Bush, W.

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ADY requires post as Improver to gain experience in Dispensing; salary 10s. per week; in Blackpool, Lytham, or St. Annes. "Statim," 16 Balmoral Road, Blackpool.

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ADY Dispenser (Hall qualification) desires Chemist's Counter experience; middle-aged. Stato salary, "P." (195/24), Office of this Paper.

LIVERPOOL.—Qualified (25), open to engagement in Liverpool; Monday and Wednesday evenings and Tuesday afternoons required off for attending medical classes. "Botanic," c/o Thompson, 58 Hanover Street.

LOCUM; qualified; days, weeks; abstainer; exp "Pharmaeist," e/o Bradburn, 18 Queenhithe, E.C.

OCUM; qualified; experienced; abstainer; 41; disengaged; references. "Pharmacist," 20 Hawkwood Road, Bournemouth.

L OCUM or Manager in country district; qualified; age 50; excellent references; 35 years' first-class experience; energetic; booking forward. Dewey, 3 Helena Avenue, Margate.

LOCUM or Manager; qualified; elderly. Please state full par-ticulars, Snoxell, 75 Woodbridge Road, Guildford.

OCUM; qualified; first-class experience; country district pre-ferred. 193/33, Office of this Paper.

MANAGER, Senior, or other responsible position; qualified; 33; high-class West-End experience; undeniable references. 192/15, Office of this Paper.

MANAGER or Locum; middle-aged; active; varied experience; town or country; best references; disengaged. "M.P.S." (190/11), Office of this Paper.

MANAGER wants situation; up-to-date trading; experienced Buyer; used to controlling staff; Major qualification. Write, "Chemist," 116 Spring Street, Bury, Lancashire.

Manager or Locum; thoroughly experienced; London and provinces. "Qualified," 87 Trinity Road, Southall, W.

MANAGER or Locum; qualified; elderly, active; best varied experience; preference for Manchester or district, but not essential. "F. B.," 32 Wright Street, C.-on-M., Manchester.

MANAGER; disengaged; good experience; satisfactory references. "Qualified," 38 West Brampton, Newcastle, Staffs.

MANAGER; 40; incligible; all-round; good experience. 194/1, Office of this Paper.

 $\mathbf{M}^{ ext{ANAGER}; ext{ married}; ext{ qualified}; ext{ excellent references}; ext{ North}}$  preferred. 195/27, Office of this Paper.

MANAGER; 50; qualified; high-class Dispensing or good-class Cash business; South or West Coast; not single-handed; reasonable hours and good salary. "Virgil" (195/36), Office of

PHARMACEUTICAL Chemist desires post with short hours. "Student," 10 Lynette Avenue, Clapham.

PHARMACIST (29), three and a half years' pres beat desires change as Branch Manager; permanency; lightle "Salol" (190/12), Office of this Paper.

PHARMACIST (27), unfit, requires position as Manit inne diately. 192/32, Office of this Paper.

PHARMACIST wants situation as Manager, wit new a eventual purchase; Store trade; London only. App "Reck mond" (194714), Office of this Paper.

PHARMACIST, clderly, married, would give half-tin r hour as arranged for permanency; excellent reference lars, "C. S.," 57 Moorland Road, Weston-super-Mare.

QUALIFIED (21) seeks situation in Manchester list. N.H.I. work preferred. 191/4, Office of this Pa

QUALIFIED desires a few evenings a week employ t; coe experience. "Senior," 49 Wandsworth Bridge d, Per

QUALIFIED (37), ineligible, requires position Bran. Manager; single-handed; disengaged about Fel moderate hours of business. Reeks, 138 Milton Road, avesses.

QUALIFIED; middle aged, active; varied experies tomed to N.H.I. Dispensing, chiefly in London, its sidered an average all-round; disengaged February toutdepreferred. "Chemist," 79 Church Street, Lower Edmin, N

QUALIFIED; 23; good all-round experience; Londor elemed Chamberlain, 28 Melbourne Road, Leicester.

QUALIFIED; Locum or permanency; in London; energetic; good general experience. "M.," Road, Balham Hill, S.W.

QUALIFIED (41), seeks berth; Liverpool preferre good est perience; reasonable salary. 193/5, Office of this per.

QUALIFIED Manager (or Superintendent) desires c ge; 3 married; abstainer; 5 ft. 9 in.; excellent ref lees to experience; outdoors and not single-handed. "Salop" 193 5 Office of this Paper.

SOUTH.—Advertiser desires berth as Manager of sistant Drug Stores; view to purchase or otherwise; his treference, excellent experience; ineligible. "Energetic" 194 10 Office of this Paper.

SUCCESSION.—Manager, view succession; excellent 1 mment tion; years west-End experience; incligible. hemil. 397 Cambridge Road, N.E.

UNQUALIFIED; 27; married; good references; eted for Army; used to quick Store trade; London prefe l; saluj 45s. Smith, 8 Vaughan Road, Camberwell, S.E.

UNREGISTERED; 40; single; 20 years' first class period "Lenoil," 52 Thane Villas, Islington.

UNQUALIFIED; married; 34; permanency; in ble; I years' all-round experience, Dispensing, Coun graphic; highest references. 193/16, Office of this P

UNQUALIFIED; Senior Dispenser, Window dresse all rouse experience; will Travel; Yorkshire preferred aper.

Army; wants change. "T." (193/31), Office of the aper.

YOUNG unqualified gentleman (26), married, no of own Pharmacy, desires permanent post; we small branch; London, country, or provinces; includes experience; total abstainer; thorough knowledge of language; excellent references. "Ronald" (187/15) this Paper.

### WHOLESALE.

COMPOUNDER, 18 years' experience in Retail, age, wishes to hear of a berth in a good firm turing Chemists; fair wage with prospects expected; hour ferred. Apply, "Hexamine" (191/25), Office of thi 'apr'

PHARMACEUTICAL and Toilet Preparations, Cb delta, and General Laboratory.—Thoroughly practical multiplied, 10 years' experience, desires London preferred. 193/1, Office of this Paper.

REPRESENTATIVE: London and 50 miles radius; eptions well known to the trade; 12 years' real selling this ground; specialities, Sundries, Perfumery, and record; first-class references; shortly disengaged. At 1, 185% Office of this Paper.

REPRESENTATIVE, Scotland; 20 years' experience of nection for Sundries, Perfumes, etc.; disenging Office of this Paper.

NOTEL R., now disengaged, desires appointment; seven vears punction West of England; also worked Midlands North unlified Chemist; excellent experience; good Sales-

tyo ve well-known Proprietary houses, covering whole of ng Counties, and Bristol and district, desires one ns 600 sound accounts amongst Chemists, Grocers, s goo Capsule connection; remuneration open to arrange-

AREH ISEMAN, Traveller; 25 years' Wholesale; energetio; trusty thy; 45. C. J., 245 Torridon Road, Catford.

## MSCELLANEOUS.

OND ND Chemists' Fittings.—We have an exceptionally fine section of these in all sizes; prices are right, and first-class condition; we shall be pleased to supply outers and prices. Call or write, RUDDUCK & CO., 262 Street, ondon, E.C.

### WANTED

L ME AND WOMEN engaged in Drug and Sundries trade any apacity-to join their trade organisation, National gamat Union of Shop Assistants, Warehousemen, and Clerks,

IEMISTS' AND DRUGGISTS' SECTION.
Branches in every town.
Linemployment, Sickness, Dispute, Free Legal Aid.
Writtor Particulars:

ARTHUR T. GILLIAN, 86 Park Road, West Dulwich, S.E. (Organising Secretary).

PFII NGS (SECOND-HAND).—12-ft. Mahogany and Plate is Serving Counter, £9 10s.; Mahogany and Plate Perfiery Showcase and Desk, Mirror back and Plate-glass es. 58; 8-ft. Mahogany and Bent Plate-glass Counter-case, Displ. and Serving Shelves, £6 17s. £6.; 10-ft. handsome Walshowcase, great bargain, £21; quantities of other line PHILIP JOSEPHS & SONS, LTD., 93 old Street and Electric Counter-Case in the property of the property of

ST c. price paid for all old Cameras, any make, also all old P to goods, no matter how damaged; any kind you may send m along; cash will be sent same day; no waiting; we all an return nothing. S. E. Hackett, 23 July Road, Liver

emis' Fittings.—Silent Salesman, Glass Showcases of every escriton, Drugfittings, Dispensing-screens, Wall-cases, Glass-Counts, Perfume-oases, Desks, Counter Drawers, Shelves, rs, sh-soiled, second-hand, at lowest prices; don't decide ou gemy estimate; you can't get better value; 30 years, Physics. GEORGE COOK, The Chemists' Working tter, therine Street, Oity Road, London, E.C.

eMis S good second-hand 12-ft. Mahogany Drug Fitting, 4ft. logany Dispensing Screen and Counter, 4-ft. Mahogany asse; l-ft. Glass-fronted Counter; Nest of Counter Drawers; masse and Desk; 4-ft. Bent Glass Counter Case; the lot bare; l-ft cheapest house for Window Enclosures, Mirrors, Shell, modern Shop Fronts, Improvements, etc.; plans presented from the property of the states free. Mills, Shopfront, Shopfitting, and Glass Wor, 163-165 Old Street, London, E.C. 'Phone London 550,

QIEEN'S A.B.O. System of Accounts; works out profit and loss account, balance sheet, wan and is a remedy for over-assessment; practically akkeeping; 12th edition. Particulars and testimonials of the co., Moat Road East, Leicester.

MIS SHOPFITTINGS (SECOND-HAND).—Ranges of Drug)rawers, Shelving, Dispensing Screens, Counters, Pervice, Showcases, Silent Salesmen Cases, 4 complete gross f Sl-rounds, Wall Cases, etc., etc. D. Matthews & Son, 16 (anchester Street, Liverpool.

Sal 12 oz. Acid, Chrysophanic., 1 gall, Tinet, Civet, 2 lb. dack) ye, 15 lb. Fennel Seed Pulv., 30 lb. Gum Copal, Ipec. Rad. Opt., 16 lb. Magnesia Calcined Levis, 30 lb. Irid 37 lb. Damar Resin, 18 lb. Sal Prunella Globules; olic. d. Cuxson, Gerrard & Co., Ltd., Oldbury.

### 6 JAY MACK'S LEDGER RESULTS AT A

| Sales | Gross | Exes | Profit | Even | Profit | Living | Saved | 1500 | 500 | 200 | 300 | 150 | 150 |

years 5 columns on pro. on receipt of cheque; booking fee if returned.

M.CK-IVOR

Ayrton's, Bleasdale's, EVANS', Raimes' (Edinb.).

### WAR WANTS EXCHANGE.

The object of this section is to facilitate the interchange of pharmaceutical products which are scarce at present owing to the Wax, and which the inquirers have failed to obtain through the mytomary business channels.

### TERMS

Minimum charge (including registration fee) of 1/for six words or less; 2d. per word beyond, prepaid. Inquiries are inserted with a registration number attached to each item, and replies will be communicated direct to the inquirers by the Juformation Department of "THE CHEMIST. AND

### WANTED.

Principals having any of the following articles to dispose of are requested to notify the fact by postcard or otherwise stating <u>Suantity</u> and price to

### THE WAR WANTS EXCHANGE.

"The Chemist and Druggist," 42 Cannon Street, London, E.C Caustic-potash sticks (195/33) Mctol (Hauff) (195/33) Hydroquinone (195/33) Pot. bromid. (195/33)

### FOR DISPOSAL

Bona-fide buyers of the following articles are requested to communicate their exact requirements promptly to us, and we shall place them in touch with aellers :-

Ammon, bromid, (193/11) Bismarck brown (genuine), 14 1-lb. tins (192/16)

Diamidophenol,

(195/28)
Exalgin, 1 oz. (194/29)
Guaiacol benz, 3/4 oz. (194/29)
Guaiacol carb., 2 oz. (194/29)
Helmitol, 1 oz. (194/29)

Heinitol, 1 oz. (194/29) Hydroquinone (Schering's), 12 oz. (191/13) Hydroquinone, 2 lb. (195/28) Metol (Hauff.), 8 oz. (195/28) Naphthaline marbles, 2 cwt.

(194/6)Phenacetin (193/11) Phenazonum, 13 oz. (194/27 and 193/11) Pot. bromid. 4 lb. (194/27 and 193/11), and 5 lb. (194/31)

Protargol, 1 oz. (194/29) Quinine sulph., 100-oz. tin (195/28)

(195/28)
Resorcin, ½ lb. (192/16), and 1 oz. (194/29)
Salol, 4 oz. (194/27)
Santonin, 1 lb. (192/16)
Sodii salicyl. (Merck's)
6 lb. (193/17)
Soda salicyl., 3 lb. (194/27), and 5 lb. (194/31)
Sulphonal, 1 lb. (192/16 and 193/11)

Yellow prussiate of potash, 3 cwt. (19476)

## EXCHANGE COLUMN

The halfpenny per word with name and address. One penny post of if we register the address and attach a number.

We advertisement inserted for less than 6d

### FOR DISPOSAL.

### APPARATUS.

FOR sale, mixing machine; new two months ago; price £7 10s.; condition perfect. Vaughan, 12 Leeds Bridge, Leeds.

BOOKS AND PERIODICALS.

GOOD books, suitable for Prelim.; cheap; send for list. 187/14, Office of this Paper.

"JOURNAL of the Chemical Society," 1907-1915, inclusive, new condition. Zortman, London Hospital, E.

### DRUGS AND CHEMICALS.

- 1 lb. balsam Peru, 208:; 300 sulphonal tabs., 5 gr., 108. Watts, Chemist, Longton.
- BISMUTH carb. in exchange for quinine sulph., 25-oz. tin, 758. Newton & Co., Yeovil.
- OFFERS wanted for 1 lb. of acid. acetylsalicylic. Smith, 5 High Street, Newport, Mon.
- 56-lb. tin 1260 glycerin, 1s. lb.; 10-lb. tin balsam tolu, 1s. 6d. 195/21, Office of this Paper.
- FOR sale, 18 lb. acid. tartaric. (crystals), 60 lb. cupri. sulph. (ground), 2 gallons ol. ricis. Hardwiche, Bury St. Edmunds. WHAT offers? thymol 1 oz., salol \(\frac{3}{4}\) oz., sulphonal 1 oz., atrop. sulph. gr. 80, morph. acetas \(\frac{1}{2}\) oz.. Wolverson's, Boeston, Notts.
- MORPHIA hydrobromide and morphia acetas (altogether about 6 oz.). Offers to be made in cash for the lot, Davis, Doneraile, Exmouth.
- 4 oz. atropin, sulph. (B. W. & Co.), 4 oz. quin. sulph. (Howards'), 1 doz. 25's phenacetin co., ½ doz. 25's phenacetin, 5 gr. 181/17, Office of this Paper.

WHAT offers? 1 lb. acetanilid., 1 oz. santonin, 30 grs. atrop. sulph.,  $rac{1}{2}$  lb. acid. salicyl., 15 grs. eserin. pur., 1 oz. chloralamid. Green, Chemist, Somersham, Hunts.

OVERSTOCKED .- Caffein, pure, 2 oz., 5s.; atrop. sulphas, 1 dram, 15s.; 4 100 phen. co. tabloids, 6s. 6d. each; resorcin, 6 drams, 38. 9d.; genuine metol, 1 oz., 6s.; salol, 1 oz., 5s. " Chemist. 16 Main Street, Larne.

1 lb. ol. lavand. Mitcham; 1 dram, eucain. lactas; 1 doz. spirosal; 850 Opponheimer's 1-gr. phenolphthalein tabl.; 1 doz. Leo's antipyrin, 25's; 7 lb. lycopodium; 10 lb. pu. trag. co. Wanted, am. brom., pyramidon, antipyrin. "Pharmacist," 49 Norwood Avenue, Southport.

### OPTICAL AND PHOTOGRAPHIC.

THREE radiopticians, Nos. 402, 403, 411; 28s. the lot; cash or exchange. Braid, Chemist, Exmouth.

### SHOP FITTINGS.

MAHOGANY and brass counter scales and weights. Dear, 111 Royal Parade, Eastbourne.

WHAT offers? 54 W. and N. mouthed shop-rounds, second-hand.

Milnes, Lanc Head, Brighouse, Yorks.
DISPENSING scales (hand), glass pans, and weights, mahogany box; cost 178. 6d.; what offers? Gowen, Hylands, Wherwell Road, Guildford.

### MISCELLANEOUS.

POCKET canteens; overstock; any price to clear. Evans, Margate. POCKET canteens, small overstock. Offers, 192/31, Office of this Paper.

RILEY'S bath cabinet, outside heater; used once; what offers? Beatty, Clones, Ireland,

WATER-BED, in thorough good condition, full size; non-infectious; cost £6; what offers? Hill, Chemist, 25 The Brittox, Devizes.

1-oz. green octagonal vials, superior quality, 3 gross lots; selfsealing postal boxes fit same; together or separately; over-

stock. 190/18, Office of this Paper.

SURPLUS Stock.—About 2 gross 6d. tins tooth-powder, 18s. gross; about 10 gross 3-oz. white. round dental-powder bottles, with nickelled sprinkler tops, 18s. gross; about 2 gross  $4\frac{1}{2}d$ . tablets shaving-soap, 21s. gross; 1 gross 6d. dredger insectpowder tins; 1 gross 1s. ditto; 10 1-lb. pink dome-top ointmentjars (3 with damaged lids); 10 1s. 6d., 10 1s., 23 6d. horticol; 500 P. D. & Co.'s sod. salicyl. tabs.; 2 lb. pil. rhei co. (coated); 2 lb. bile beans (Warner's). Maurice Smith,

### WANTED.

8 or 16 oz. genuine dugong oil. 190/39, Office of this Paper. SOME good cheap rheumatic rings wanted. 17 Scotland Road, Liverpool.

SULPHONAL. Quantity and price to "V.," 119 Okehampton Road, Exeter.

TRYPAN blue. State quantity and price, Lennon, 14 Lafone Street, London, S.E.

WANTED, 2 lb. pot. brom., ½ lb. amm. brom., ¼ lb. sod. brom. Braid, Chemist, Exmouth.

COUNTER beam scales, to weigh up to 2 or 4 lb., by good maker. Donnelly, 284 Derby Street, Bolton.

WANTED, about 100 5-gallon carboys. State lowest price, condition, and quantity to W. Luty Wells, Yiewsley, Middlesex.

WANTED, a few pounds of solicylate of soda. quantity, and make, Hale, Chemist, 11 Broadway, Highbury Park, N.

WANTED, 6½-dram and 1½-oz, panelled green bottles. State quantity and price, sending sample if possible, Reade Bros., Ltd., Wolverhampton.

TIN boxes, decorated or plain, for ointments, tooth-powders, etc., wanted; any quantities for cash. Levers, Chemists, 56-58 Chapel Street, Manchester.

OPTICAL books; Minor, Major, Chemists' books; send prepaid for valuation; cash offers per return. Gower, Bookseller, 41 Voltaire Road, Clapham, S.W.

WANTED, "Family Encyclopædia of Medicine" (edited by H. H. Riddle), bound or unbound; must be complete, in good condition, and reasonable. Eden, 26 Duke Street, Millom.

SURPLUS stock chemicals, drugs (original unopened packages only), packed goods, soaps, perfumes, sundries. Lists, with prices, to Delmas & Co., Burlington House, Hinckley Road, Nuneaton.

2-dr. green corn-solvent bottles, brush (or rod) on corks; also round green globe-stoppered smelling-salt bottles (1-oz.); any quantity immediately for each. Vivian Miles, 51 Fleet Street, Swindon.

### Late News.

### Police Warning.

Police Warning.

Two cases of drugs consigned to Spain w stolen October while being conveyed to the L lon Do Among the contents of the cases were t follow 30×100 gram and 80×25 gram tins morph pdreble 200×50 gram pots ergotin, 80×25 gram posts, opi, 81898 80×25 gram bots, ext. opii, B.P. 1914, 5 scammon., argyrol, and Sloan's liniment. Ar chemistry has had any of the above drugs offered to his suspen circumstances should communicate any infortion to Snow Hill Police Station of the City of Lond Police.

Medicine Stamp Acts.

An appeal by Knoll & Co., Ltd., 8 Harp ne, Loub E.C., against a conviction under the Medici stamp M (see C. & D., August 21, 1915, p. 40) came of for hear in the King's Bench Divisional Court, Lon, on dray 27. One of the points of the appeal was the sending of price-lists and circulars regarg the me cines in question was a holding-out of the reparation to the public. The appeal was dismissed, we costs.

## Thursday's Markes.

42 Cannon Street, E.C., muary !

### Cablegram.

New YORK, January 26.—Business is active advanced to \$12.50 pcr lb. Menthol is lower Arnica-flowers are firmer at 35c. Cartager pecacutal has advanced to \$3.75. Mexican sarsaparily like. Copaiba balsam has advanced to 55c. leaves have been reduced to \$1.25.

AMERICAN DRUGS.—The following are a few frent quotions: Barks—Euonymus (wahoo), 1s. 9d. 1 lb. net warchouse; sassafras, 9d. ex warehouse; where, net to arrive; and witch hazel, 4½d. c.i.f. to a ve. Herb Lobelia, 7½d. c.i.f. to arrive; scullcap, 10½d. f. to arrive; Leaves—Damiana, 7d. c.i.f. to arrive; with c.i.f. to arrive; Neots—Blue flag, 10d. c. to arrive golden seal, 21s. c.i.f. to arrive; leptandra. sulves), warehouse: Mexican sarsanavilla 9dd. warehouse: ex warehouse; Mexican sarsaparilla 9½d. warehouserpentary-root, 1s. 10d. ex warehouse; still ia 6d. c to arrive; unicorn (helonias), 2s. 3d.; ditto (tris), le. c.i.f. to arrive

ARSENIC.—The City of Corinth has broug 1,871 bar from the Pacific Coast. Spot price is 30l. Balsam Canada is offered at 4s, 6d, net o pot in Co

in tins.

CASCARA SAGRADA.—We note the arrival c 87 packs

CASCARA SAGRADA.—We note th CASCARA SAGRADA.—We note the arrival call packs from Pacific Coast ports to London. On t quoted 52s. 6d. to 55s.

CASTOR OIL.—A limited quantity of Frisch is offered at 97s. 6d. per cwt., and for Italicases 115s. net is quoted.

EPSOM SALT.—With increased production person side.

easier side.

HEXAMINE is tending easier at from 4s. 3d b. per Honey.—Several shipments of Californian ave armiv sellers ask about 45s. for this description Hawaiian is selling at 39s. 6d. Jamaica as a highest condenses. tendency.

Lycopodium.—Sales have recently been lade to U.S.A. at up to 6s. per lb., but the curre from 6s. 6d. per lb. upwards.

MORPHINE DIACETYL. HYD.—A limited qui ty is off

OTTO OF ROSE.—At a naval-prize au on 11 (5,000 oz.) Bulgarian offered, and three cas sold at 35s. to 36s. per English oz. Bids of 30s. v other lots.

PARALDEHYDE is easier at about 14s. per l PEPPER.—Nothing offered at auction and is quiet. Fair Singapore is quoted at (75dd, and Lampong 7d. White pepper is 50 quiet. Singapore offering at 93d., Muntok 10ad., a Penang

all on the spot.

QUICKSILVER.—We note the arrival of 5) flasks

Seville to Liverpool.

SHELLAC.—Some large orders have beer eccived Russia for shipment in March when nav tion is to the control of the contr

SPERMACETI is offered at from 8d. to 9 for Amerofined ex warehouse.

TANNIC ACID.—Leviss is scarce, but techn lis plent

SPECIAL TERMS.

# "MILK OF MAGNESIA"

(REGISTERED TRADE MARK)

P.A.T.A.

S THE ORIGINAL AND ONLY GENUINE

The attention of the Trade is specially directed to the above Trade Mark.

In bottles, 1/- and 2/3

# 'Phospho-Muriate of Quinine Co."

In bottles, 5/-

For dispensing purposes only, 3/6 per bottle.

# THE CHARLES H. PHILLIPS CHEMICAL CO.

14 HENRIETTA STREET, COVENT GARDEN, W.C.

Telephone No.: 275 Gerrard.

# BUY your WATERGLASS in good time.

OW many women, think you, when they have had to pay 1/- for three or four eggs this Winter, have thought "My word! I'll lay a lot down in waterglass this year!"? Certainly many thousands, and Waterglass is, therefore, going to enjoy a record season.

Simply exhibit tins and showcards—let the housewives in your neighbourhood see that you have Waterglass of high quality at a modest price and you will get a good share of the trade.

Ordering your stock now will ensure early delivery at the season's lowest price.

Two excellent and very attractive labels (see illustration) are provided—one with blank for Chemist's name and one bearing our name. State which preferred when ordering, or if desired, we will gladly send you samples of each.

# Two strong (sixcolour) Showcards with initial orders.

PRICES.					
1 lb. tins				3/-	per dozen
2 lb. tins				5/-	per dozen
4 lb, tins				8 6	per dozen
7 lb. tins				13/-	per dozen
14 lb. tins				25/-	per do <b>zen</b>
	SOLDERED		TINS	FREE.	•

GOODALL, BACKHOUSE & CO., LEEDS.



a fuerante Cadbury's Cococe Essence (unflew d)

so absolutely here + we haved only from the first selected Cocoa



